

**CULTURAL LIFE IN THE
SOVIET UNION**

Cultural Life In The Soviet Union

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EDUCATION

CHAPTER I.

INTRODUCTION

EDUCATION has been a matter of great concern to the Soviet Union from its very foundation.

Lenin stated: "We need an enormous cultural development," and that it was necessary to master "the knowledge without which the modern conception of an educated man is impossible."

Article 121 of the Constitution reads:

"All citizens have the right to education."

The introduction of *universal compulsory education* for children is one of the main indications of a country's cultural standard.

About *four-fifths* of all children in Russia were deprived before 1917 of the possibility of getting education.

With the provision of the necessary conditions, such as school buildings and trained teachers, it became possible to introduce universal compulsory education in the Soviet Union. At the XVI Congress of the All-Union Communist Party in 1930 Stalin said:

"The main thing now is to introduce compulsory elementary education. I say 'main' because such a change would mean a decisive step in the cultural revolution. And it has long been high time to begin this, because we have to-day all that is necessary to organise general elementary education in the vast majority of districts of the U.S.S.R."

The same year the Soviet Government decreed the introduction of universal compulsory primary education throughout the country. A gigantic process of school building was begun. In the far north of the Soviet Union,

where peoples did not even have alphabets of their own prior to the Soviet regime, in the steppes of Central Asia, in the remote mountain villages of the Caucasus, schools sprang up. The number of schools built during the 28 years of Soviet rule by far exceeds the number built during 200 years of tsarism. Here are some figures:

In 1918 there were only 12 primary schools and one secondary school with a few hundred pupils in the Kabardino-Balkarian Autonomous Soviet Socialist Republic, whereas in 1940 there were 94 primary, 61 secondary, and 92 seven-year schools incomplete (from 8 to 15 years of age) totalling 74,648 pupils.

Similarly striking changes have occurred in other Republics of the Soviet Union.

In 1914 there were 84,000 pupils in the Armenian Soviet Socialist Republic, in 1989 there were 820,000; in 1914 there were 6,800 pupils in the Turkmenian Soviet Socialist Republic, in 1989 there were 228,000; in 1914 there were 17,000 pupils in the Uzbek Soviet Socialist Republic and in 1989—1,106,000 pupils, etc.

In 1988 the Soviet Government decided to introduce universal seven years' education in towns with an extension on local initiative to from 8 to 10 years, i.e., from 8 to 18, as a part of the plan for the universal compulsory education of children.

Special education institutions to train skilled workers, technicians and engineers for industry, specialized agricultural workers, nurses and doctors, have been opened alongside the general schools. In 1914 there were 85,800 pupils in vocational schools, in 1940—802,800; there were in 1914 24,700 students in universities and institutes, and 564,600 in 1940-41.

The Soviet Union inherited from tsarism an extremely large number of illiterate adults who had first to be given

primary education. Special schools for adults, of a temporary character, and evening classes were created for that purpose in addition to facilities for individual education.

As a result of these measures illiteracy was almost completely wiped out in the Soviet Union.

Many of the nationalities which inhabited Russia did not even have alphabets of their own before the advent of the Soviet State. The Soviet Government has carried out educational work of great magnitude, and has accomplished a "cultural revolution" in the National Republics. New schools, institutes, clubs and libraries have been opened in which children and adults are able to study freely in their own languages. Striking changes which have occurred in the cultural life of the National Republics can be seen from the following table:

Literacy in Different Federal Republics.

		1926	1939
		Per cent.	Per cent.
R.S.F.S.R.	... ..	55.0	81.9
Ukrainian S.S.R.	... ..	57.5	85.3
Azerbaidjan S.S.R.	... ..	25.2	75.3
Turkmen S.S.R.	... ..	12.5	67.2
Uzbek S.S.R.	... ..	10.6	67.8
Tadjik S.S.R.	... ..	8.7	71.7

The educational system of the Soviet Union serves all sections of the population.

The declaration of October 16, 1918 on unified schools for the Soviet working masses laid down the following main principles as the basis for the educational system:

1. *State Schools.* All types of education institutions are financed from the State budget. The State deter-

mines the tasks and the character of school work (syllabuses, curricula, and other measures). The management, leadership and control of education are vested in the hands of the educational authorities.

2. *Secular Education.* Separation of the school from the church. The People's Commissariat for education in its decision of February 18, 1918, explained: "Considering that religion is a matter of conscience for every individual, the State in religious matters remains neutral, i.e., it does not back any particular religion, does not grant any rights or privileges, nor does it support any particular religion materially or morally. It follows from this that the State cannot undertake the task of religious education of children."

3. *Education for All.* All citizens without regard to their religion or social standing, sex or nationality, have access to *general and vocational education.*

This access is guaranteed by the following measures:

(a) By education free of charge. Education up to the eighth year of the secondary school is free of charge. From the eighth to the tenth year inclusive a pupil has to pay a small fee of 50 roubles a year which amounts to 1.4 per cent. of the annual average income (data of 1928) and thus cannot be an obstacle to the education of children. Many children such as those of invalids of the Patriotic War, pensioners, partisans, are exempt from any fees. The low price of books and other educational accessories makes the education of all children possible. The State publishes text books at very low prices in order to make them easily available to all children. As a comparison, a daily newspaper costs 15 kopecks, while an arithmetic text book for the first year costs 60 kopecks, i.e., only four times as much as the price of a daily news-

paper, such as is bought by every citizen. New text books are published annually in millions of copies.

(b) By giving grants to good students in technical schools, universities and institutes. Education in vocational schools is free of charge and good students are granted scholarships which cover all their expenses for their training period.

The fee for education in universities and institutes is 400 roubles per annum. But all good students receive a grant which ranges from 185 roubles a month in the first year to 800 roubles a month in the last year. Special scholarships are granted to exceptionally brilliant students.

(c) By carrying on education in the native language. Education in schools in every national republic is given in the children's native language. Children of different nationalities may study in Russian schools if they so desire, but even in such towns as Moscow and Leningrad, where the overwhelming majority of the children is Russian, national schools for Tatars, Armenians, etc. are to be found. Teachers may be of any nationality so long as they know the native language of their pupils.

CHAPTER 2.

THE EDUCATIONAL SYSTEM

The educational system of the Soviet Union consists of a network of all types of general and vocational schools and educational institutions, for infants, children and young people.

A. Educational institutions for children below school age:

Creches for infants up to 3 years old are under the supervision of the People's Commissariat of Health. Kindergartens for children of 3 to 7 years are under the Commissariat of Education.

B. Educational institutions for children and adolescents.

(a) General Education (primary, middle and secondary school).

(b) Special schools: 1. Forest schools. 2. Schools for the deaf and dumb and for the blind. 3. Schools for backward and mentally defective children. 4. Special schools for the arts.

(c) Residential educational institutions: 1. Children's homes. 2. Suworov schools.

(d) Children's institutions for out-of-school activities.

C. Vocational schools for children and adolescents:

(a) Trade and railway schools.

(b) Factory apprentice schools.

(c) Teachers' training schools.

(d) Medical schools (for nurses, etc.).

(e) Technical schools for different specialities.

D. Higher Education—universities and specialised institutes.

All cultural-educational institutions such as libraries, clubs, reading rooms, theatres, cinemas, etc., come under the supervision of the educational authorities.

A. KINDERGARTENS.

The *Kindergarten* is an institution for children below school age (3 to 7 years old).

Kindergartens may be opened and run not only by the educational authorities, but also by any employing organisation or trade union. But supervision of the education and physical development of the children is exercised by the educational authorities.

Kindergartens are organised by the State to help the family. Children, whose parents are engaged in work during the day, must not be neglected. A child remains in a kindergarten from 8 or 9 a.m. to 5 or 7 p.m., spending the rest of the time with its family.

The day's time-table in a kindergarten includes games, educational play, walks, meals and sleep at definite hours. The older children learn reading and arithmetic. The fee for a child is low and children of war invalids, pensioners and of large families are exempt from all fees.

The number of kindergartens is increasing yearly. There were only 275 kindergartens and playgrounds in 1919 which catered for 7,000 children, while by 1940 their number had increased 200-fold and reached the total of 55,102. They catered for 2,331,848 children.

B. (a) GENERAL EDUCATION.

The present structure of the general school was determined by the Soviet Government on May 16, 1934. There are three types of general school in all republics: primary school, middle school and secondary school.

A school is directed by a headmaster or headmistress who is appointed by the educational authorities. In those primary schools where there are only two or three teachers a senior master or mistress is appointed instead of a head.

The head is aided by an assistant for study. His duties are: the efficient organisation of school life, the maintenance of educational equipment and supervision and control of the work of the teachers.

The teaching staff of a school is recruited from trained, qualified people. A teacher in a primary school must possess a teachers' training school certificate, a teacher in a middle school must have finished a teaching institute, and a teacher taking forms 8, 9 or 10, must have finished an Institute of Education or education department of a University.

The teacher's salary varies according to the age group of his pupils, his own educational qualifications, and length of service. There is equal pay for men and women.

The school year in all schools of the Soviet Union begins on September 1. During the year there are three short holidays in addition to the summer holidays which are from two to three months.

The *primary* schools are found mainly in rural districts—in villages and remote mountain hamlets where the number of pupils is not sufficient to have a middle or secondary school. A primary school consists of four classes and is co-educational. In accordance with the law on universal compulsory education all children on reaching the age of seven must be sent by their parents to the primary school. The administration of a school has to see that all seven-year-old children in the district attend school. There is no examination for admission.

Among primary schools there are:

Full complement schools, i.e., schools with the full number of pupils in all four classes with a teacher for each class.

Two-unit schools, schools with less than the standard number of pupils per class. There are only two teachers in

such schools. Each teacher takes two classes (I and III, II and IV).

One-unit schools, i.e., small schools in which one teacher takes all lessons in all four classes.

Middle schools have seven classes from I to VII. The first four classes are similar to those of a primary school. Pupils are admitted into the fifth class of a seven-year school on completing the fourth class, or from a primary school in another area. There is no examination on admission, the only qualification being the marks received by a pupil at the spring examinations on the conclusion of the fourth year.

The age of a pupil of a middle school must be between 7 and 8 in the first class and between 14 and 15 in the seventh.

The majority of middle schools are co-educational, but in large towns there are separate girls' and boys' middle schools.

Those who finish a middle school get a certificate which entitles them to: (1) admission (without examinations) into the VIII class of a secondary school; (2) admission into secondary vocational schools (in some of them with, and in some without, examination); (3) admission to various short-term courses such as commercial courses. Those young people, who for one reason or another do not want to continue their studies, either enter industry or offices, taking up work which does not require any special qualification. But the Soviet Government encourages all such citizens to have a secondary education, and they are encouraged to attend evening classes which enable them to improve their qualifications later.

The *Secondary school* is a complete 10 years general school. There are secondary schools in all towns, in large villages, workers' housing settlements, etc. There is a

network of secondary schools in all districts of every town including the most remote suburbs.

The first four classes of a secondary school correspond to the four classes of primary schools.

The first seven classes of a secondary school correspond to the seven classes of a middle school.

Pupils attend a secondary school between the ages of seven in the first class and seventeen in the tenth class.

In towns with a large number of secondary schools, education is given separately to boys and girls. In such cases there are separate boys' and girls' schools. In provincial secondary schools with a small number of pupils the sexes are mixed.

On finishing secondary school pupils receive a diploma testifying to their completion of secondary education. This diploma entitles them to admission into any of the higher educational institutions, and to different short-term courses requiring as a preliminary the completion of secondary education. Those students who get "excellent" marks in their examination for all subjects receive a diploma *cum laude*. This entitles them to be admitted into higher educational institutions without examination.

A pupil finishing a secondary school can acquire any speciality by means of short-term courses. The majority of pupils from secondary schools usually want to continue their studies and go to a university or specialised institute.

The aim of *evening secondary schools for working youth* is to enable them to complete their secondary education without leaving their work. There are six classes in an evening secondary school—classes 5 to 10. The curriculum and syllabus are similar to those in ordinary secondary schools, the difference being only in relation to the organisation of studies and methods of teaching. Studies are carried out in cycles. Thus for instance, one term is taken

up by one group of subjects, the humanities (languages, literature, history); or by physicomathematical subjects (algebra, geometry, physics); in accordance with the syllabus. Having passed the examination for one cycle a student can take up the second cycle. Thus the students are enabled to cover the year's syllabus of an ordinary secondary school in one year. The lessons in an evening secondary school for working youth are given three times a week and last three hours at a time. On finishing these schools the students receive diplomas testifying to the completion of their secondary education and all the rights that this affords.

THE AIM OF THE SOVIET SCHOOL.

The aim of the Soviet school is to give general education to the citizen and to make him a useful member of the community.

All general schools in the Soviet Union have broadly the same syllabus, but the national characteristics of each republic are of course taken into consideration and the timetables of all non-Russian schools have to allow a definite number of hours for the native language, literature and national history.

Text-books are also uniform. They are approved by the People's Commissariats of Education for a period of several years. Children in all schools use, for example, the same physics text-books, and solve problems taken from the same book of exercises. Text-books are compiled either by the most experienced teachers or by eminent scientific workers and are approved by committees of scientists and public workers.

This is how the history text-books, for instance, were compiled.

Following a decision of the Council of People's Commissars, a competition for the best elementary history of

the U.S.S.R. for primary schools, with brief references to general history, was held in 1936.

All the leading professors of history took part in the competition. The jury chose as the best text-book the "Concise History of the U.S.S.R." compiled by the Faculty of History of the U.S.S.R. at the Moscow State Educational Institute, under the leadership of Professor A. V. Shestakov.

The Council of People's Commissars set up five groups to prepare history text-books for the fifth to tenth classes and approved their results. The drafts of these text-books were revised by the most prominent scholars and statesmen of the country. Stalin, Kirov and Zhdanov took a personal interest and made numerous suggestions which helped the authors of these text-books.

The uniformity of educational curricula, syllabuses and text-books assures the realisation of the principle of the uniform school, a uniform standard of education for the younger generation and State supervision over the school. This enables pupils to take up their studies without examination and without difficulty in the corresponding class of a new school when moving to another town.

The curriculum for secondary schools includes the following subjects: Russian language and literature, mathematics (arithmetic, algebra, geometry, trigonometry), physics, chemistry, natural sciences (botany, zoology, human anatomy and physiology, theory of evolution, geology and mineralogy), astronomy, the Constitution of the U.S.S.R., history (ancient, medieval, modern), history of the U.S.S.R., geography, one foreign language, physical training, writing, draughtsmanship, art, singing, and military training (elementary military knowledge which the young men will require when joining the services).

The study of natural science, physics and mathematics occupies an important place in all curricula.

The hours devoted to each subject are distributed as follows:

<i>Subject.</i>	<i>Number of hours per year, according to the curriculum adopted in 1942/43.</i>	
	<i>Number</i>	<i>Per cent.</i>
Russian language and literature ...	2,676	28.4
Mathematics	2,092	22.0
Physics, chemistry, astronomy ...	848	8.9
Natural sciences	528	5.5
Geography	570	6.0
History and Constitution of U.S.S.R.	797	8.8
Modern languages	658	6.8
Writing, draughtsmanship, art and singing	880	8.4
Physical and military training ...	1,048	11.0

THE ORGANISATION OF EDUCATIONAL WORK

In the first four classes all principal subjects are taught by one teacher, who takes a class from the day of their admission to the end of the fourth class. Starting from the fifth class the lessons are given by specialists.

The progress of pupils is assessed by means of marks from 1 to 5. From the fourth class onwards all pupils have to take an end-of-year examination.

The methods used in the Soviet school are various, but they are all subordinated to these fundamental principles: they must be based on a conscious and intelligent assimilation by the child of the given subject and must be as thorough and as much linked with practice as possible.

Lenin used to say that to become an educated man one "...has to enrich one's mind with all the wealth of knowledge that mankind has accumulated."

"We do not want mechanical assimilation, but we want to develop and improve the mind of every pupil by knowledge of basic facts. You must not simply learn them, but acquire them in such a way as to allow a development of a critical approach, to prevent the mind from becoming congested with masses of unnecessary material."

This proposal of Lenin was laid down as the foundation for the education of children. Education authorities have to make sure that a subject is presented logically and methodically, that the teacher develops in the children a capacity for independent work with books, in laboratories, and in workshops, and that he makes use of available visual apparatus, experiments, and excursions.

CHARACTER TRAINING.

Besides the academic task, every teacher is responsible for character training and the general development of the pupils; for training the "new man."

"This new man," said President Kalinin, "must be infused with the best qualities of man...These qualities are: love for the people and for the working masses, honesty, courage, solidarity, and love for work. One has not only to love work, but to carry it out honestly, bearing in mind all the time that whoever eats and exists without working lives on the fruits of someone else's labour."

A firm and conscious discipline in class is a fundamental principle of conduct.

Persuasion and explanation to the pupils of what is required from them coupled with the firm demand that they should observe accepted rules are the main methods of obtaining good behaviour. Punishment is used in schools.

but its application is strictly controlled by the education authorities. Corporal punishment, detention which causes children to miss their meals, and similar methods are absolutely forbidden.

The following measures are in use:

Rewards. Praise by the teacher, and certificates of merit issued by the head of the school.

Punishments. Reprimand by the teacher, public reprimand in the class room, order to the pupil to stand up, order to leave the class room, loss of conduct marks, reprimand at a meeting of the Teachers' Council, or finally, expulsion from the school (temporary expulsion must be approved by the district education authorities).

Special "Rules for Pupils" regulating their conduct both inside and outside school, are approved by the Government. For example, pupils must not go to cinemas, theatres and other places of entertainment during school hours. They are expected to be kind and helpful to old people, small children, the weak or ill. They must give them first place, and offer them their seats in trams and buses and assist them in every way.

The main responsibility for the general development of the pupils rests with the head teacher, but in addition one of the senior teachers is appointed by the head as responsible master or mistress for every class. This teacher organises these pupils, helps them in their "self government" and in the work of Young Communist League and pioneer organisations.

There are clubs and societies (called "circles") in every school. They usually meet once a week after school hours and work under the supervision of a teacher or other qualified person.

Once a month evening performances are organised in schools in which the pupils take part.

THE "PIONEER" AND "KOMSOMOL"* ORGANISATIONS

The main task of the Pioneer and Komsomol organisations is training for good citizenship. Duties connected with the Pioneer and Komsomol organisations develop in the children a sense of responsibility towards the community and accustom them from childhood to carry out social duties.

Pioneers consider it their duty to be an example to other children: to study well, to help their family at home and their school-mates at school. Pioneers are organised in detachments and groups. They have a banner of their own, wear a red tie, bring out a wall newspaper of their own, and salute one another in a special way. At gatherings of these detachments they read, or listen to talks given by adults, rehearse plays, recite poetry, play games, and so forth.

The members of Komsomol who are in the senior classes guide the activity of the Pioneer organisations. Thus, members of the Komsomol help the head and other teachers in the work of bringing up the younger children. They are the most conscientious and energetic pupils and organise the out-of-school activities. Under the guidance of teachers they edit wall-newspapers, organise different activities (technical, artistic and sport).

The war has shown that the schools have fulfilled their task and have given the country millions of soldiers full of courage, self-sacrifice and patriotism.

B. (b) SPECIAL SCHOOLS.

1. *Forest schools for children with delicate health.* Forest schools are boarding-schools and sanatoria combined.

* Russian abbreviation for the "Communist Union of Youth." The "Pioneers" are an organisation for the younger children. [Translator's note.]

where children get medical treatment, sometimes for several years, and simultaneously continue their studies, under supervision of a doctor, following as far as possible the normal syllabus.

2. *Schools for the deaf and dumb, weak-sighted and blind.* These schools function as an independent type of educational institution with a special curriculum and syllabus, special text-books, equipment and apparatus. There are special scientific departments at the People's Commissariats of Education which supervise the work of such schools.

8. *Schools for mental defectives.* There are not a great many schools of such type. Special curricula and syllabuses are prepared for such schools, as well as special text-books and apparatus, to enable a mentally deficient child to get an elementary education and acquire some suitable manual profession by the age of 15 or 16.

4. *Special art schools.* There are special art schools in large towns for exceptionally gifted children: the schools of music attached to the Conservatoires, ballet schools attached to theatres, schools of painting and so on. They are supervised by the Committee for the Arts of the Council of People's Commissars of the U.S.S.R. In addition to special subjects, pupils in such schools also take general subjects in accordance with the secondary school curriculum.

B. (c) RESIDENTIAL EDUCATIONAL INSTITUTIONS.

1. *Homes for children of school and pre-school age.* Such institutions cater for orphans, who remain in them up to the age of 14, get a general education up to middle school standard and acquire skill. At the age of 14, a pupil is sent by the Administration of a Children's Home to a vocational or technical school which has a hostel attached to it.

2. *Suvorov military schools* are residential secondary schools and cater for sons of Red Army men and officers, of partisans and for orphans whose parents perished in the war. Suvorov military schools prepare boys for military service, giving them an officer's training and a *general secondary education*.

Suvorov schools are under the People's Commissariat of Defence.

B. (d) OUT OF SCHOOL CHILDREN'S INSTITUTIONS.

These include: Libraries, Pioneer clubs, technical centres for children, centres for young naturalists, excursion and tourist centres, sports centres and sports stadiums, skiing centres, swimming pools and other institutions, centres for the arts, children's cinemas and theatres.

The task of these institutions is to help the academic work of the school and to provide healthy and creative forms of leisure. They enable youth of school age to carry on studies after school hours in subjects in which they are particularly interested, to enlarge their general knowledge and to improve their physique.

C. VOCATIONAL SCHOOLS.

(Technical schools, railway schools, factory schools.)

The task of these schools is to train skilled personnel for transport and industry.

The training of skilled workers, owing to the constant growth of heavy industry, has been occupying the Soviet Government from the very first days of its existence. Prior to 1940 there were factory apprentice schools attached to factories. These schools trained two-and-a-half million skilled workers for industry during 20 years. Short-term courses trained 8,800,000 skilled workers. Despite this

there was by 1940 an acute shortage of skilled labour in transport and industry which was caused by the fact that hundreds of new plants, mines, railways and power-stations were coming into operation.

In view of this shortage a government decree of October, 1940, provided for a tremendous extension of trade, railway and factory schools.

Boys and girls between 14 and 15 years old with not less than a primary education are admitted into trade and railway schools. The training lasts for two years.

These schools train metal workers, oil workers, assistant engine drivers, railway repair workers, etc.

Factory apprentice schools train workers for jobs of average skill in industry and the building trade. The training lasts six months. Boys and girls of 16 to 17 irrespective of their previous education are admitted to these schools.

The training in all these types of schools is carried out under conditions which as far as possible correspond to those existing in industry itself. The pupils in their training use the actual industrial raw materials and work on lathes of the latest models. They receive for their products 80 to 100 per cent. of the remuneration usually paid for work of that kind. This enables the State to make use of these schools to carry out important State assignments.

Thus, for instance, one of the technical schools manufactured 80,000 mines during two years of the war and reconditioned 6,000 rifles, 280 guns, 250 machine-guns, and 240,000 navigational instruments for the air force.

There are special technical colleges of the State labour reserves which train teachers for all three types of school.

The training, and the distribution of the trained workers, is supervised by the Central Department of

Labour Reserves of the Council of People's Commissars of the U.S.S.R. and by the local administration of labour reserves.

Technical schools of different specialities, teachers' schools and junior medical schools (for nurses, midwives, etc.), are vocational schools which accept young people of 15 or 16, who have finished the middle or seven-year school. Training lasts three or four years. They train specialists of average skill (nurses, technicians, teachers for primary and infant schools, etc.).

There were in the U.S.S.R. 3,695 such technical schools (or "technicums") with 802,200 students during the 1940-41 school year, as follows:

			Number of Technicums.	Number of Students. (in thousands)
Industrial	...	...	549	177.0
Transport and communications			156	52.1
Agricultural	...	...	785	111.8
Law	...	...	36	4.0
Teachers' training	...	...	884	197.6
Medical	...	...	1,042	208.5
Art	...	...	202	23.7
Economic organisation	...	...	141	33.0

D. HIGHER EDUCATION.

(Universities, Institutes and Colleges).

Universities and single-faculty institutes admit men and women who have completed their secondary education and passed the entrance examination or have obtained full marks in their final school examination.

Only 15 per cent. of all students were women in the universities of Tsarist Russia. In 1938 43 per cent. of the total number of students were women.

The Soviet Government and the Communist Party consider the problem of training qualified personnel to be of very great importance. In his letter to the first All-Union Conference of Proletarian Students in 1925 Stalin wrote :

"Higher educational establishments and Communist institutes, workers' faculties and technicums are schools in which key people for economic life and culture are trained. Doctors and economists, co-operators and teachers, mining engineers and statisticians, technicians and chemists, agricultural and transport workers, veterinary and forestry workers, electricians and engineers are the future leaders in the building of the new society, in the creation of the socialist economy and socialist culture. It is impossible to build a new society without new leading personnel. . . ."

The number of higher educational institutions increased from 91 to 788 in 20 years. The number of new technical institutions is especially high. There are institutes for every branch of the country's economy.

DISTRIBUTION OF HIGHER EDUCATIONAL INSTITUTIONS.

<i>Types of Higher Education.</i>		<i>Year.</i>	
		1917	1940
1. Universities and Single Faculty Institutes for the Arts	... ..	45	398
2. Medical Institutes	... ..	9	78
3. Agricultural Institutes	... ..	10	86
4. Technical and Transport Institutes	... ..	14	152
5. Economic Institutes	... ..	6	48
6. Art Institutes	... ..	ed specialist in	25
		institute, the syllabus	

provides for *compulsory practical training* in factories, agriculture, hospitals, schools and in the communication services, according to the student's speciality. Students have to attend *compulsorily* not only lectures, but also laboratory work, workshops and so on.

The military and physical training of students comes within the time-table, but additional work is done after the regular hours, in sport organisations, clubs, and at stadiums. The trade union and Komsomol organisations regularly carry out what are termed "test parades," covering the military training of students, competitive games, ski runs, cross-country runs and marches, and so on.

The teaching staff of a faculty consists of professors, lecturers and assistants. There are two scientific degrees in the U.S.S.R.: Doctor of Science and Candidate of Science. The rank of Professor is conferred upon Doctors of Science, and that of Reader or Lecturer upon Candidates of Science.

In the school year 1940-1941 in all institutes of the U.S.S.R. there were: 5,858 professors, 18,105 lecturers or readers, and 81,557 assistant lecturers and instructors without degrees.

Universities have special post-graduate courses which train professors, lecturers and scientific personnel. These courses are taken up by the most gifted and successful students who desire to devote themselves to scientific work after graduating.

In the school year 1940 to 1941 there were 12,266 such students.

Students training for university teaching are granted State allowances and are exempted from all fees. When they graduate they have to defend a thesis, after which, if they pass, the degree of Candidate of Science is conferred on them.

CHAPTER 3.

THE EDUCATIONAL SYSTEM IN WARTIME

A. SCHOOL.

The war interrupted normal school activities. The school had to undertake new tasks such as helping in the evacuation of children, organising aid to evacuated children and, especially orphans, the provision of clothing, shoes and hot meals for children, and the provision of help to collective and state farms in agricultural work.

In the first days of the war the Soviet Government ordered the evacuation of all children below the age of 14 to the eastern regions of the Soviet Union.

Children's homes, kindergartens and technical schools left with pupils, staff and equipment. Pupils of general secondary schools were evacuated either together with their parents, or as boarding schools under the supervision of their teachers. Some factories, enterprises and offices organised, at their own expense, boarding schools for the children of their employees.

Long trains carrying children left for the Eastern regions situated thousands of miles away. Children were often in great danger as German pilots frequently bombed and machinegunned the trains. Although they travelled under the protection of Soviet fighters, many of them were killed and others suffered injuries that have crippled them for life.

The children were terrified and worn out by all they had to go through. They had to be welcomed, comforted, housed and given an opportunity of continuing their studies.

The local authorities prepared beforehand kindergartens, boarding schools and children's homes, provided them with

furniture, crockery and kitchen utensils, underwear and even with allotments. The allotments of children's homes in the Sverdlovsk region alone totalled 2,891 acres.

But the time available was too short for a complete preparation. Much had to be done by teachers and children themselves. They took part in the work of reconditioning houses, collected and transported fuel, and cultivated their own allotments. This went on throughout the whole period of evacuation.

The local population gave much assistance to the evacuated children. Industrial and office workers helped in their spare time to recondition school buildings, and women washed, mended and sewed the children's clothes. Collections to aid the children were carried out throughout the country.

"During the days of preparation and celebration of the twenty-sixth anniversary of the Red Army alone, the youth of Moscow city and region collected 24 millions roubles from the population, and 1,870 tons of foodstuffs for the Soldiers' Children's Fund. During the same period Moscow factories produced after working hours and above plan 850 thousand yards of cloth, thousands of pairs of shoes and underwear as well as knitted and fur articles of clothing for the evacuated children." ("Vechernyaya Moskva.") All towns and villages throughout the country did their share in the same way.

Many families adopted children. They were made to feel happy and at home with their new families, and their dreadful memories gradually faded and they became once again healthy and cheerful.

The number of children adopted by families totals over 100,000.

In spite of the war education continued. The evacuated children used the local school buildings.

There were a great many difficulties: inadequate accommodation, insufficient text-books, pens, pencils, and other equipment.

A number of teachers had been called up, others had joined the partisans.

There were 1,222,805 teachers in 1941. Their number decreased by about 50 per cent., reaching the figure of 774,795 by the beginning of the school year 1943-44.

To enable all children to get education there had to be two and even sometimes three shifts in the schools, and the number of pupils per class increased to 40 or 45.

A number of schools in Leningrad carried on work even during the siege. Children did everything not to miss school, although class rooms were freezing and the children often had nothing to eat at home. They received supplementary food rations at school in accordance with a special decision of the Leningrad Soviet.

In the middle of October, 1941, when the enemy was close to Moscow and German planes were bombing it day and night, the regular work of the Moscow schools was seriously interrupted. But tutorial sessions were still held at the schools for children who studied at home and later sat for their examinations.

Normal studies in the Moscow schools were resumed in the autumn of 1942.

The overwhelming majority of schools, institutes, clubs and libraries, in regions temporarily occupied by the enemy, were destroyed. In Stalingrad and the Stalingrad region alone the Germans destroyed 567 schools and 186 children's homes.

The restoration of schools in the liberated regions and in the front line areas began in 1942. In those villages where school buildings had been destroyed, schools were housed in the best available buildings of the village;

peasants often offered their homes for school purposes. The local authorities, parents, teachers and pupils themselves helped to repair schools, furniture and equipment. Special brigades of engineers, builders and technicians were sent to these regions; architects have worked out plans for temporary school buildings.

Despite the fact that the whole of our industry was engaged on war work, the Council of People's Commissars of the U.S.S.R. ordered that school furniture be manufactured. Thirty-five thousand desks were despatched to the Stalingrad, Rostov, Kursk and Orel regions in 1948.

Text-books, education apparatus and stationery have been sent by the People's Commissariats of Education of the Union Republics to the liberated regions; 5,649,700 text-books, 19,419,000 exercise books, 88,559,000 pencils, 3,319,000 pens were sent by the R.S.F.S.R. in 1948.

Where only yesterday there was the front-line, to-day school activity is in full swing.

524 schools with 50,000 pupils were functioning in Rostov-on-Don and the surrounding region only four months after the Germans had been driven out.

1,272 schools with 148,619 pupils were functioning in February, 1944, in districts of the Smolensk region which had been liberated in August, 1943.

The number of schools decreased from 198,025 to 116,548 in 1941-42, but already 140,156 schools were functioning in 1948-44.

To provide the necessary number of teachers the Government released all teachers who since the beginning of the war had been engaged on other work. A decree increasing the salaries of teachers was issued in August, 1948. Expenditure on teachers' salaries was almost doubled in the R.S.F.S.R. In accordance with a government deci-

sion teachers get rations equal to those of transport and industrial workers and in addition get their lunch at school.

The Government is caring for children in the same way. They have hot lunches at school and delicate children have a special diet. In accordance with a decision of the Council of People's Commissars of the U.S.S.R. special allocations of different types of goods have been made available for children. These allocations provide children's homes, kindergartens, schools and boarding schools with footwear and clothing for those children who are in need of them.

Sanatoria, summer pioneer camps of sanatorium type, and children's summer play centres have been set up to help in the restoration of the health of children who have had to live in occupied regions or in besieged towns. These institutions are free of charge for the children.

Over a million urban school children left their cities for pioneer camps during the summer of 1943.

In order to provide education and training for the children of Red Army men and officers, partisans, as well as children whose parents perished at the hand of the German invaders, the following institutions were organised in the year 1943/1944.

Number of Children.

9 Suvorov military schools	...	4,538
23 special technical schools	...	9,000
118 special children's homes	...	16,800
26 special homes for small children	...	1,850

Expenditure for education in 1944 was nearly double that for 1943 (21.1 thousand million roubles, as compared with 12.7 in 1943).

Curricula and syllabuses have not been changed during the war. Only text-books for primary schools have been

enlarged by information on how the country was living, working and fighting against the Germans during the war. Despite wartime difficulties examinations show that the work of pupils has not deteriorated in comparison with pre-war years.

The Soviet Government, which has been devoting a great deal of attention to the problem of education, has during the war carried out a number of important measures aiming at a further improvement of school activities.

Certain changes have taken place, as follows:

1. Separate education of boys and girls has been introduced. Boys' and girls' schools have been opened in 80 large towns of the Soviet Union. All the schools use the same text-books and have the same curriculum and syllabus, but separate classes make it possible to take into consideration the special characteristics of the physiological development of boys and girls, certain of their psychological characteristics, and differences in training and preparation of boys and girls for practical life.

2. More attention is being paid to military and physical training in boys' than in girls' schools. Boys do military training and sports, not only during school hours, the total of which is equal in both types of school, but also after school hours.

In 1942 a decree of the Council of People's Commissars of the U.S.S.R. was published "on preliminary pre-service military training of pupils from the first to the tenth class of the middle school, secondary school and technicum" and "on military and physical training of pupils in primary schools and those of the first four classes of middle and secondary schools."

These decrees drew the attention of those in charge of schools to the military and physical training of pupils.

The number of hours given in schools on military matters and physical training was increased.

In 1938, 596 hours were devoted in the course of the whole year to military and physical training. This represented 6.2 per cent. of the total; in 1948 the number of hours amounted to 1,048, i.e., 11.0 per cent. of the total.

During the summer holidays pupils of the eighth to tenth classes attended camp for a fortnight. In the course of lessons on military matters and at camp instructors devoted their attention mainly to providing youth with practical knowledge of shooting, map reading and battle formation.

At the same time pupils were shown in the course of lesson on physics and mathematics how these subjects are connected with military science.

A children's sports organisation "Smena" ("Shift") was created in July, 1948. By the end of 1948 members of this organisation in the Russian Federation alone totalled over 670,000.

3. In 1948 the age of admission to school was lowered from 8 to 7 years.

4. The same year the People's Commissariats of Education of the Union Republics worked out and approved new "Rules of Conduct for Pupils."

5. A special type of school—evening schools for working youth—became especially widespread during the war. This arose out of the fact that a large number of young people of 15 or 16, unable to finish their studies at secondary schools, went to work during the war; 1,005 such schools with 158,710 pupils have been opened in the R.S.F.S.R.

Help rendered by children to the State.

Senior pupils, under the supervision of teachers, helped during their summer holidays with the work of collective and state farms. This was necessary because the state and collective farms were short of man-power owing to the fact that a large number of men had joined the services. Some 4.5 million pupils and 800,000 teachers helped in this work on the land in 1942. In addition, during their summer holidays, children collected berries, mushrooms and medicinal herbs for various purposes.

According to incomplete figures, pupils of 20 regions collected and delivered to the local authorities of the People's Commissariat of Trade 844 tons of dried mushrooms, 5,764 tons of pickled mushrooms, 5,158 tons of berries and fruit, and 1,150 tons of medicinal herbs.

Members of the Pioneer and Komsomol school organisations played a leading part in this help rendered by children to the war effort.

Pioneers in their spare time helped the wives of servicemen with their housework. They helped to look after small children whose mothers were working in the collective farms and factories. In summer the pioneers helped the families of servicemen on their allotments. In winter they stopped at school after school hours and made toys for small children and presents for Red Army men. Members of the Komsomol cut and sawed wood, brought it in for the winter and trained the people for A.R.P. work. They acted as roof-spotters during air-raids and saved many buildings from destruction by fire.

An outstanding example of Soviet youth is Zoya Kosmodemyanskaya, a pupil of the tenth class of one of Moscow's schools, who joined the partisans. With courage she met her death at the hands of the Germans. She was posthumously awarded the title of Heroine of

the Soviet Union. She is to-day one of the country's most famous people. Lisa Chaikina and Shura Chekalin and a host of other heroes of the Soviet Union were also the product of Soviet education.

B. VOCATIONAL SCHOOLS.

Technical and railway schools, as well as factory workshop apprentice schools became especially important during the war. The majority of adults were called up to the services and industry was lacking skilled labour. Technical schools were urgently needed for training young people for skilled work.

The Magnitogorsk metallurgical technical school No. 13, during six months of 1943, produced in its open-hearth furnaces steel sufficient to manufacture 10 million hand grenades, 1.5 million mines, 1.5 million tommy-guns and over 3,000 tons of steel for heavy tanks.

Goods manufactured by pupils of vocational schools have covered, in value, about half the cost incurred by the Government for their maintenance.

Factory workshop apprentice schools trained 1½ million skilled workers during the period from the beginning of the war up to July, 1943.

C. HIGHER EDUCATION.

At the beginning of the war there was a decrease in the number of both institutes and students. Important universities and institutes were evacuated to the rear.

The numbers of institutes functioning and of students during the war are as follows:—

Years.	Institutes.	Students.
1940-41	782	564,578
1941-42	508	312,868
1942-43	460	227,445
1943-44	515	320,780

The evacuated universities had to work in very unfavourable conditions. Suitable premises were scarce, part of the libraries were not evacuated, and there were not enough professors and lecturers. Difficulties in the food situation made it necessary for the institutes, trade union and Communist Party organisations to cope also with the problem of providing students and professors with food, accommodation and essential commodities.

The decrease in the number of students is to be explained by: (1) the fact that among the students who graduated from universities in 1941 there were not only students who had completed five years, but also who had only completed four; (2) a number of students volunteered to join the forces; (3) a number of students went to work in view of the urgent requirements of industry; (4) the number of students admitted to the first year was lower than in previous years.

As the country required doctors, engineers, constructors, physicists and technicians in larger number than before, the institutes, in order to meet these requirements, temporarily reduced the length of the courses while keeping the syllabuses unchanged. At the same time the length of the academic year was reduced; the year in 1941 and 1942 started on October 1st and not on September 1st as in pre-war years. This was due to the fact that students helped during the summer and autumn on collective farms, in forestry and in the peat industry.

In the regions temporarily occupied by the Germans all educational institutes were destroyed. Kiev University—one of the oldest in the country—was destroyed and its library plundered. The German barbarians made Kharkov University laboratories into workshops and turned its lecture halls into barracks.

Since 1943 the return to the west of the universities and institutes and the restoration of damaged institutes in regions liberated from the Germans has been going on continuously. In 1943 the following were restored: Stalingrad Education and Teachers' Institutes, the Kursk Education Institute, the Pyatigorsk Education and Teachers' Institutes. Work on the reconstruction of Kiev, Kharkov and other universities was also started.

Special funds have been allocated for the reconstruction of these institutes. Those of the rear regions have donated a part of their equipment to the restored institutes in liberated territory.

The normal length of courses was restored in the autumn of 1943.

To increase the number of entrants, universities, such as for instance Moscow University, Moscow Aviation institute and Leningrad University, have opened preparatory courses. Such courses have enabled potential students to cover the syllabus for the ninth and tenth classes of secondary school in one year or six months. They can then sit for the entrance examination.

There has been no fundamental change in the syllabuses for higher education, but studies were naturally conducted according to war-time requirements. Practical work has always occupied an important part in the curriculum, but its importance has increased still further in the years of war.

A great deal of attention is being devoted to the military training of students. The so-called "military day" has been introduced. During that day, once a week, students undergo military training which includes drilling, tactical exercises, firing, ski-ing, swimming, etc.

The Government has done everything possible to raise the living standard of students and to give them oppor-

tunities for study. For this purpose increased allowances for students have been introduced in a number of universities; students who are war invalids and those whose parents died in action are exempt from all fees; students' rations are equal to those of transport and industrial workers; students with delicate health are provided with special diets; certain institutes have special students' canteens which the Government provides with extra food; and the have their own allotments cultivated by students and professors.

To provide the necessary scientific staffs post-graduate courses which were abolished at the beginning of the war were re-introduced in 1943.

All these measures have enabled higher education to continue despite war-time difficulties and provide the country with highly skilled personnel for all branches of its economy.

The Tenth Session of the Supreme Soviet in February, 1944, fixed the rate of reconstruction work as regards higher education for 1944, as well as the number of students. The expenditure allocated by the State budget was sufficient to restore 86 institutes in regions liberated from the German invaders. This means that the number of students for the whole of the country will show an increase of 40.6 per cent.

SCIENCE

SOVIET SCIENCE IN THE SERVICE OF THE PEOPLE

I. SCIENCE IN RUSSIA BEFORE THE REVOLUTION

SCIENCE in our country has a long and distinguished history, and the Soviet Union received a not insignificant heritage from pre-revolutionary Russia.

In the days of Peter the Great at the end of the seventeenth century, firm commercial and cultural connections between Russian and Western Europe began to be established, and a rapid growth of science began once the country had defeated the Swedes and consolidated its position. The most symptomatic expression of this growth was the foundation of the Academy of Sciences at St. Petersburg in 1725. The Academy became the cradle of new-born Russian science. By the side of famous foreigners like the mathematician Euler and the engineer Bernoulli, there soon appeared in it excellent Russian academicians as well, and first and foremost M. V. Lomonosov, the pride of Russian science.

This son of a peasant from our northern seaboard embodied the genius, the breadth of mind and the energy of the Russian people. Rapidly acquiring the book-learning which at that time was still being taught in the old fashion in Moscow, Lomonosov was sent to the Petersburg Academy, whence he soon went abroad to study with a number of other young Russians, among them the future inventor of Russian porcelain, Vinogradov. Five years later Lomonosov returned to St. Petersburg, and here at the Academy, for a quarter of a century, his scientific and poetical genius unfolded in unusual variety.

Lomonosov was the majestic dawn of a new Russian culture. He was a great chemist and physicist: he was the first to prove by experiment the conservation of matter in chemical changes, he worked out the atomic theory of gases, he was the creator of a new and important branch of science—physical chemistry. Astronomy owes to Lomonosov the remarkable discovery of the atmosphere of the planet Venus.

He was the author and constructor of many new optical instruments, the inventor of Russian mosaic, a geographer and geologist, an historian and the compiler of the first Russian grammar. And at the same time, Lomonosov was a splendid poet and an outstanding artist who with his own hands devised artistic mosaics. Even to-day, two centuries later, the figure of Lomonosov, in all its variety, originality and strength, seems difficult to imagine.

Lomonosov left his country an example for all time of how science can and must serve the people.

The particular importance of the Academy of Sciences in the eighteenth century was that from the first years of its work it became the organiser of the manifold study of Russia itself—of its geography, vegetation, animal world and natural resources. It was thanks to the work of Academicians like S. P. Krasheninnikov, P. S. Pallas, I. I. Lepelkin, S. G. Gmelin, N. P. Rychkov and N. Y. Ozeretkovsky that Russia for the first time came to know herself.

Gradually there began to arise, by the side of the Academy, other centres of learning—universities and specialist higher schools at Moscow, Kazan, Kharkov and other cities, the Academy of Military Surgery at St. Petersburg, learned societies and institutions, and military educational establishments.

During the two centuries from the age of Peter the Great to the October Revolution, our country produced a worthy array of great and outstanding scientists in many branches of knowledge, made its vast contribution to world science, and rendered no little service to its people even in the difficult conditions of Tsarist Russia, when science was often merely "tolerated," and feared as the destroyer of "fundamentals," i.e., of reactionary principles.

Among the famous mathematicians of pre-revolutionary Russia we are particularly proud of N. I. Lobachevsky, who discovered, one may say, a whole world of so-called non-Euclidian geometry. Lobachevsky with every justification is often compared to Copernicus.

Among the number of outstanding Russian physicists who followed M. V. Lomonosov, there are V. V. Petrov, who discovered the electric arc, E. K. Lentz, the discoverer of important laws of electro-magnetism, B. S. Jacobi, the inventor of galvano-plastics, P. N. Lebedev, who was the first to prove by experiment the pressure of light and to measure it, A. G. Stoletov, who discovered photo-electricity, B. B. Golitsyn, who created the science of the quantitative study of earthquakes (seismometry).

In the history of pre-revolutionary Russian chemistry there shines the name of D. I. Mendeleev, who discovered the great periodic system of the chemical elements, which transformed the seeming diversity of chemical phenomena into a basic and strict law of nature of the very greatest significance. Our chemists Zinin and Butlerov were in the front rank of the creators of modern organic chemistry.

Russian geographers rendered incalculable services to their country. Some of them have already been mentioned, and to these must be added the famous names

of Miklukha-Maklay, Kropotkin, Przhevalsky, Kozlov and many others. This vast country, covering a sixth part of the land surface of the globe, and many other parts of the earth were studied and described in detail by these courageous travellers and scientists.

The scientists of pre-revolutionary Russia also made many additions to the science of life itself, biology. Of great importance for the theory of the development of the animal world was the brilliant work in the field of evolutionary embryology by K. M. Behr, A. O. Kovalevsky and I. I. Mechnikov. The famous botanist K. A. Timiryazev in his works ascertained the basic physical aspects of the most important process of the absorption of carbon dioxide from the air by green plants under the influence of light. The physiological work of I. M. Sechenov and I. P. Pavlov laid the foundation of an entirely new conception of the phenomena of consciousness, thought and brain processes.

Pre-revolutionary technique in our country was also symptomatic of the immense creative scientific powers of the people. In the eighteenth century the self-taught engineer Kulibin constructed bridges with remarkable mechanical qualities, and another, Polzunov, invented a steam engine. In the nineteenth century Academician Jacobi invented galvano-plastics and built the first motor boats, the engineer Yablochkov was the inventor of the arc lamp, and Lodygin of the incandescent electric lamp. Popov was the first to give practical effect to radio. N. E. Zhukovsky was a most outstanding theoretician of the aeroplane.

At the same time the destinies of these inventions in pre-revolutionary Russia were nearly always melancholy. The proper conditions did not exist in the country for their being brought into real life and for their introduction in practice on a large scale. Frequently important inven-

tions went abroad, where they were widely adopted or else simply forgotten, leaving no trace. Tsarist Russia was not a suitable field for the development of modern large-scale technique.

Repeating the well-known lines of Lomonosov, one may say that the history of science in old Russia proved beyond doubt

"That Platos not a few,
Quick-witted Newtons too,
The Russian land can breed."

But fully to value these "Newtons," to apply their thoughts and scientific discoveries to real life, to build up schools and successors around them—this for the most part was beyond the capacity of those times. There were good places of higher education, but they were very few, and great scientists in most cases remained solitaries, without pupils to continue their work. There was no one to see to it that all spheres of science and technique were represented in the country. In most important branches of science sometimes not a single specialist existed in old Russia.

Peter I. did a great work: into ancient Russian learning with its Byzantine traditions and inertia, he breathed the new spirit of Galileo and Newton. For two centuries that learning went on growing. It gave Russia Lomonosov, Lobachevsky and Mendeleyev, but it was inadequate in its scope and in its penetration into life.

The further development of Russian science was fettered by the reactionary system on which the rule of the nobility and the bourgeoisie reposed. It was only the Socialist revolution that could transform Russian science into a mighty force that assisted in the building of a people's State, in its defence and in the promotion of industry, agriculture, medicine, and popular well-being.

II. SOVIET SCIENCE IN THE FIRST YEARS OF REVOLUTION

The great October Socialist Revolution gave new energy and direction to our science. The young land of the Soviets was during its first years in a ring of hostile neighbours and invading States, who had the new technique at their disposal and threatened our country with it. In the economic sense the country was extremely enfeebled by years of war. In these conditions it was particularly important to push ahead the development of science and technique. "In order to win," said Lenin at the height of the Civil War in 1920, "it is essential to understand the whole profound history of the old bourgeois world, and in order to build Communism we must take both technique and science and send them into action for wider circles....."

In these difficult years the Soviet Government found opportunities and resources for a radical change in the condition of our science. In 1918 V. I. Lenin himself drafted the outline of a plan of scientific and technical work, according to which the Academy of Sciences was invited to conduct economic and technical research of first-class public importance—like the rational distribution of industry, the electrification of transport, industry and agriculture, and the application of water-power and wind-driven motors.

There came into being, and began to be widely encouraged, a new form of organisation of science—large and well-equipped institutes of scientific research on special subjects. There were soon created in Moscow the Central Aero-Hydro-Dynamic Institute (TSAGI), the Institute of Physics, and the All-Union Electro-Technical Institute (VEI). At Leningrad there was the State Optical Institute (GOI), the Physico-Technical Institute, the Roentgen Institute, the Radium Institute and many others. The

organisation of these considerable institutions, in which hundreds of specialists were to be engaged, presented a very difficult task.

First of all, it was people, experts, that were required. The Soviet Republic received very few of them from old Russia. It was urgently essential to train youth, to develop self-instruction and short courses, to send people abroad. These difficulties were overcome. The cadres of trained personnel grew. In branches of knowledge which quite recently had still been a "desert solitude" there appeared well-informed people, with a thorough and original understanding of their subjects. The army of scientists grew from day to day.

In the old Academy of Sciences things also moved in a new way. Where previously, without haste, a specialist Academician would be working in seclusion, there began to appear an ever-increasing number of commencing scientists and students, and the quiet and remote study little by little transformed itself into an institute with laboratories and specialities of various kinds.

Academician N. S. Kurnakov organised the Institute of Physical and Chemical Analysis. The famous laboratory of Academician I. P. Pavlov was transformed into a large and well-equipped Physiological Institute. Academician V. A. Steklov headed the Physico-Mathematical Institute; and so on.

From the very first months of Soviet power there also began to come into being new universities and places of higher education, both in our capital cities and in the distant provinces. Soviet science began to grow, expand, branch out and become complex, just as the young shoots of plants grow under the influence of life-giving rain after a prolonged drought.

With its very first steps Soviet science had sometimes to pass a very serious "State examination." At the direc-

tion of the Soviet Government, and under the guidance of Academicians P. P. Lazarev and I. M. Gubkin, there began, while the Civil War was still raging, and in fact in the very zone of operations, the detailed study of the Kursk magnetic anomaly, which later led to the discovery of vast deposits of iron-ore. In 1920 Academician A. E. Fersman with his colleagues began researches on the Kola peninsula in the Far North. They led to the discovery of most important deposits of apatites and nepheline, which have become the basis of an industry.

On the directions of Lenin a commission of Soviet electrical engineers drew up a great plan for the electrification of the country. This plan embodied the results of vast technical and economic work, and was of great practical importance. Later on, it found its application in the Stalin Five-Year Plans. It was at that time that Stalin characterised the plan of electrification as "a masterly sketch of a genuinely unitary and genuinely State economic plan." He wrote of it as a Marxist attempt, unique in our age, "at introducing under the Soviet super-structure of economically backward Russia a genuinely realistic technical and productive basis, the only one possible in present conditions."

As a result of the intensive activity of the new institutes and of industry, the young Soviet country began to produce its own electrical machinery, its own radio, its electric lamps, its own optical glass and optical instruments. Aircraft construction was perfected on the basis of the remarkable theoretical work of N. E. Zhukovsky and S. A. Chaplygin, and the science and art of the construction of modern motors and railway engines were gradually acquired.

Practical Soviet medicine grew to an uncommon extent, and together with it there also was an expansion of scientific research in the sphere of medicine and biology.

Agricultural science, directed to the task of raising the fertility of the peasants' fields, found its feet and developed on a great scale.

The national policy of Lenin and Stalin faced our linguists with responsible problems. The foundations of a script, together with dictionaries and grammars, were drawn up for many peoples who constitute part of the Soviet Union, and for the first time there began the scientific compilation of the history of these peoples.

But the most important event in the history of our science in these years was that henceforward the public and political life of the country as a whole began to be determined by a scientific theory, the teaching of Marx and Engels concerning the laws of social development, which the genius of Lenin and Stalin developed.

Year by year the character of science in the U.S.S.R. began to change. By means of the school, of oral propaganda, of lectures, books, newspapers and the wireless, science penetrated into the very depths of the people. Very rapidly the army of workers in science grew to almost tenfold what it was before the revolution. Whereas previously science was divorced from practical tasks, and scientists not infrequently were distracted by extremely abstract questions, scientific theory now became organically bound up with the requirements of technique and practice. Science became more accessible, more widespread and approached much more closely to the needs of life than had been the case before.

In pre-revolutionary Russia, when people spoke of science, they always in reality had in view individual scientists like Lomonosov, Lobachevsky or Mendeleev. In Soviet days it has become customary and natural to speak of schools and institutes, of the school of Pavlov, the school of Kurnakov, the TSAGI, the GOI, and so forth, i.e., of considerable collective bodies of scientists.

Yet at the same time this by no means meant the weakening of the role of an outstanding personality, genius, or talent. A brilliant scientist came to be valued even more than before, but he was no longer a solitary figure, as he had been previously, but a teacher and the guide of a scientific school.

Even in its first and particularly difficult years, Soviet science gave much to its people and to the whole world, to "world science" as we usually say. Academician D. S. Rozhdestvensky and Professor A. A. Friedman made very important discoveries bearing on the structure of atoms and the theory of relativity. Academician A. F. Joffe laid the foundations of the modern physics of crystals. At the Pavlov Institute remarkable work on conditioned reflexes continued. Academician N. Y. Marr created a new and revolutionary theory of language.

By the side of these lofty fights of theory, there were truly incalculable results, large and small, but all with practical significance, in the spheres of the search for useful minerals, of chemistry, of electrical technique, of radio, optics, aviation and other branches of technique.

Science generously and without undue delay repaid the people for those better conditions which were granted to it by the victorious revolution.

The special attention which was paid to science by the Bolshevik Party and the Soviet Government during the first steps of the Soviet State, in the severe years of Civil War and insurrection, acquired a decisive significance later, in the years of the Stalin Five-Year Plans and the great Patriotic War. That young generation which had been drawn into scientific research in the first years of the Soviet power grew up to maturity, and in the years of the Patriotic War proved to be the main force determining the development of our science and technique.

III. SOVIET SCIENCE DURING THE STALIN FIVE-YEAR PLANS

In December, 1925, at the Fourteenth Communist Party Congress, Stalin put forward the aim of transforming the Soviet Union from an agrarian into an industrial country. In April, 1929, the first Five-Year Plan for the development of national economy was adopted at the Sixteenth Party Congress.

Throughout the boundless expanses of the Soviet land, a new and immense industry began to grow. Soviet science and technique themselves entered in the planned Socialist economy, upon the path of planning, and were directed to the service of expanding industry, transport and agriculture.

The possibility of planning scientific research at first met with distrust. The approximate argument was as follows: "Science in its very essence aims to discover the unknown; and how can the unknown be planned? Will the result not be the kind of problem which is set in the folk tale: 'Go to the place I don't know, and bring back I don't know what?'" In practice this line of thought is mistaken: it is confuted by all the past of science, and particularly by our Soviet experience.

Scientific research very much resembles a journey through a mountainous district with dizzy peaks, ravines, plateaux and valleys. Sometimes the traveller reaches a sheer wall and really does not know what to do further; he has to climb painfully to the summit. But then from that height vast expanses unfold before him, and he can sometimes draw up a very detailed plan of his further journey for a long period ahead. From height to height a plan of the journey is quite feasible. The heights are those great discoveries which determine for a long time

ahead the paths by which science is to develop. Such was the theory of natural selection of Darwin, the periodic law of Mendeleev, Pavlov's teaching on conditioned reflexes. One of the very greatest summits of science is the teaching of Marx, Lenin and Stalin.

In technique the possibility of planning is still more evident and reasonable. The constructor of aircraft knows beforehand, and has long known, in what way the average power and speed of future aircraft will grow from year to year. The modern locomotive is the consistent and planned development of the original locomotive of Stephenson.

Together with the economy of the nation, science began to plan its way ahead for quarters, years, and five-year periods. Such a science, developing according to plan, gave very much to the State. It helped in the carrying out of the first Five-Year Plan and the later plans. When setting forth the main aims of the Five-Year Plan, in his report on the results of the first Five-Year Plan, Stalin gave pride of place to the moving of the country "from its backward and sometimes medieval technique on to the rails of modern, present-day technique." In order to give effect to this throughout industry and agriculture, an intensive work of research was required, affecting both the essence of the industry concerned and the details of its technology. Very often such work was not at all the discovery of new commanding heights, but a planned and accurate advance through difficulties which stood in the way of the end desired.

Such planned work was carried on, not only in the large specialised institutes and in works laboratories, but also in the central scientific institutions, at the Academy of Sciences, at the universities and colleges. Along the avenues of planned science, our scientists, engineers and

technicians gradually made their advance in all sectors of a vast and very varied scientific and technical front.

Not so long since, we had very many "blank spaces" in many scientific departments. Planned science in the years of the Five-Year Plans has filled these blanks and helped to train up expert specialists, in spheres in which quite recently we still had neither men nor traditions.

In addition, and in close connection with this vast but at first glance not easily noticeable scientific work, there also went on along the whole front the "conquest of the heights."

Our science may be proud of many remarkable pieces of scientific work during the Five-Year Plans, opening up broad experimental and technical horizons, frequently of world importance. Here are some examples out of the realm of physics—a science which developed most energetically during these years, both in our country and abroad.

D. V. Skobeltsyn applied a new method for the study of cosmic rays and of the processes of disintegration of atomic nuclei, by placing the so-called Wilson chamber in strong magnetic field. With the help of such a method he for the first time proved—one may say, gave visible proof of—the very existence of cosmic rays, determined the energy of the particles composing them and discovered a new phenomenon, the "showers" of the particles. Skobeltsyn's method, taken up in all countries, made possible a number of important discoveries. With its help there were discovered abroad positive electrons, new elementary particles without an electrical charge, which form part of the atomic nucleus and have been called neutrons.

The Moscow physicists L. I. Mandelstam and G. S. Landsberg, simultaneously with the Indian research

worker Raman at Calcutta, discovered a new most important optical phenomenon, the so-called "combinational diffusion of light." Its essence is that the quality, or spectrum, of the diffused light turns out to be altered, by comparison with falling rays, in consequence of the oscillations of the atoms in the molecules of matter. This phenomenon has become of very great significance for understanding the nature of light and likewise the nature of matter. At the same time it has opened up secret places in the internal structure of molecules. The significance of the discovery can be judged, for example, from the fact that during the seventeen years which have passed since it was published, several thousand works have appeared in all countries which apply and develop it further.

At the present time this "combinational diffusion" is passing further and further into practice in laboratories and factories for purposes of analysis of organic compounds, in particular of various derivatives of oil, for the analysis of benzine and other materials.

P. L. Kapitza built an ingenious and very productive machine for the liquefaction of helium gas, which is a process of extreme difficulty. Working with liquid helium he discovered in it under certain conditions, near a temperature of absolute zero, quite a new quality of super-fluidity, an almost complete absence of viscosity. This is an unheard-of-thing, which has set a big problem for theory, and points to a new and previously unknown quality of matter at low temperatures.

V. A. Fok has solved a very difficult problem of how to calculate the structure of complex atoms such as that of sodium. On the basis of this method it has become possible quantitatively to calculate in advance the characteristics of complex atoms, in the same way as

astronomers have been doing since the days of Newton in respect of complex planetary systems.

A young physicist, P. A. Cherenkov, discovered a new optical phenomenon. If any simple liquid—water, sulphuric acid, glycerine, etc.—be illuminated with gamma or beta rays proceeding from radium, there arises a scarcely visible luminescence, which possesses astonishing qualities. It is directed only forward, along a cone, is almost equal in vividness for any liquid and has other unusual peculiarities. It became possible to ascertain that this was a new page in the theory of light; a case in which electrons move within matter with a speed exceeding that of light.

Two other young physicists, Petrzhak and Flerov, discovered the remarkable fact of the spontaneous disintegration of the nuclei of the uranium atom.

New and important results were also achieved during the years of the Five-Year Plans in the application of physics to technical problems.

Quite new fields in radio technique were opened up by the work of L. I. Mandelstam, N. D. Papaleksi, A. A. Andronov and others on "non-linear fluctuations" (these fluctuations are mathematically described by non-linear equations). In a long-familiar sphere of phenomena, one that seemed thoroughly studied (for example, even in a simple electric bell), more precise mathematical analysis revealed new features. Radio technique in its theoretical aspect thereby was rising to a higher level than before. The new theory provided new practical conclusions also. Thus, electrical machines were built on a new principle, and new methods of fighting radio interference were proposed.

Another interesting step in radio technique, which we owe to the same persons and to their school, is the construction of a radio range-finder, i.e., an apparatus which

makes it possible with the help of radio waves to determine with great exactness a distance of a hundred on more kilo-metres. This method has proved very useful for exact geodetic surveying at sea.

P. L. Kapitza, whose name has already been mentioned in connection with work on the super-fluidity of liquid helium, has built a new and powerful machine for producing liquid air on the turbine principle. This machine has great advantages over those which previously existed, and has become the basis of a new technique in refrigeration.

V. P. Linnik has worked out the application of optical interference phenomena for delicate calculations and extremely sensitive inspection of the quality of polished surfaces. He built several pieces of apparatus for this purpose, which have become widely known and applied in the U.S.S.R. and beyond its borders.

Many new discoveries have been made by the Soviet physicists L. A. Kubetsky, V. V. Timofeyev and others in the sphere of so-called electron-optical phenomena, which are beginning to find many varied applications in different technical spheres (sound film, television, some war equipment, etc.).

Among the mathematical works which have been produced in the U.S.S.R. during the Five-Year Plans, the researches of I. M. Vinogradov in the theory of numbers have had a wide echo. This theory is a sphere of mathematics in which our country has always occupied one of the foremost places. I. M. Vinogradov not only solved some problems in the theory of numbers which had seemed insoluble for centuries, but developed a potent analytical method the application of which may bring new and fruitful results.

Soviet chemists brought up in the scientific schools of A. E. Favorsky, S. V. Lebedev and N. D. Zelinsky have

provided the theoretical and technological foundations for developing the production of synthetic rubber, for the synthesis of polymerising compounds (plastics), for artificial motor fuel and for the manufacture of a number of important organic products.

Many valuable results in the sphere of new metallic alloys have been achieved by the scientific school of N. S. Kurnakov.

The works of P. A. Rebinder and his school have opened up very substantial practical prospects in the study of the influence of superficially active substances on various mechanical processes (such as the sinking of boreholes in geological prospecting).

Over the vast area of the U.S.S.R. Soviet geologists continued their systematic study of its natural resources. Oil geology, which for a number of years was directed by I. M. Gubkin, was greatly developed. Considerable new oil deposits were discovered, particularly the so-called Second Baku which is already producing millions of tons of good oil.

Among Soviet geographical discoveries of those years particular mention must be made of the Polar expeditions, which had as their object to give effect to Lomonosov's old dream of a great Northern Sea Route. The flight to the North Pole which was directed by O. Y. Schmidt, and the famous drift on the ice-floe carried out by I. D. Papanin and his colleagues, will always remain one of the glorious pages of Soviet and world science.

Intensive study was made of the physics of the globe, its atmosphere, seas and oceans and hard crust. The daring flight of Soviet stratonauts, the study of the upper layers of the atmosphere by sounding balloons, with the help of stratosphere balloons and during alpine expeditions, have provided new and important material concerning the physics of the stratospheric flight by aircraft.

An original path was followed by research into the physics of the hydrosphere in the work of V. V. Shuleikin and his pupils. It has led to the creation of an essentially new branch of science, with a number of important theoretical and practical results.

The hard crust of the earth, and particularly earthquakes, continued to be systematically and widely studied by the school of B. B. Golitsyn, under the guidance of his pupil P. M. Nikiforov.

Science has become immense. I must limit myself to the examples I have quoted, although many important results were achieved during the Five-Year Plans in biology, in medicine, in agriculture, in history, in the science of language, in economics, in theoretical law and particularly in technique. The arbitrary selection of examples principally from the sphere of the physical sciences was determined, of course, by the special subject of the present author.

The unitary philosophy of dialectical materialism has year by year united Soviet science ever more strongly in all its branches.

Idealistic tendencies and the relics of metaphysical materialism which have penetrated our science from time to time always encountered acute criticism and resistance. Dialectical materialism gradually was mastered and understood more clearly in all its profoundness and breadth, and was successfully applied to concrete materials in various branches of knowledge.

The new social conditions created by the victorious revolution also determined to a very high degree the particular features of Soviet science. In its best expressions it became a science which, to use the words of Stalin in 1988, "does not shut itself away from the people, does not hold itself aloof from the people, but is already to serve the people." It was a science "the men of which

know the power and importance of established traditions in science and skilfully make use of them in the interests of science yet nevertheless will not be slaves of those traditions and have the courage and resolution to break old traditions." At the same time it was a science in which new tracks "are being laid down, sometimes by persons not generally known to science, even quite unknown in the scientific world, by simple people, practical men and women, innovators in the course of experience."

IV. SOVIET SCIENCE AND THE GREAT PATRIOTIC WAR

The great Patriotic War of the Soviet Union brought our science face to face with new tasks.

Many young scientists exchanged their microscopes, telescopes, reports and books for the rifle and the greatcoat and went to the front. Many of them gave their lives in defence of their people and their culture. Others remained in their laboratories and institutes, continuing their scientific work almost in view of the enemy.

The history of Soviet science will not forget those scientists of Leningrad who for over two years, under air bombing and artillery fire, in conditions of hunger, cold and unprecedented privation, continued their scientific work, read lectures, worked in hospitals and wrote books. They gave their strength to the uttermost to aid the soldiers who were defending their native city. Physicists repaired artillery range-finders, helped to camouflage the city and the ships of the Baltic Fleet and solved new problems connected with the necessity of establishing communications with the "mainland" over the ice of Lake Ladoga. Botanists helped to produce vitamins from plants to save the people from scurvy. Doctors sought out new methods of fighting dystrophia (exhaustion from hunger).

The main forces of Soviet science were drawn off deep into the rear. They were evacuated beyond the Volga, to the Urals and Siberia. Institutes of the Academy of Sciences were at Kazan, Sverdlovsk, Frunze, Tashkent, Alma-Ata and other Soviet towns. The Ukrainian Academy of Sciences took up its abode at Ufa. Deep in the rear also were set up again the specialised institutes—the State Optical Institute at Yoshkar-Ola, the All-Union Electro-Technical Institute at Sverdlovsk and so forth.

The institutes, like industry itself, were evacuated so that they might mobilise themselves to the maximum and give still greater assistance to the Red Army.

Our science had to go through a most difficult test. In unaccustomed and frequently inconvenient conditions, in buildings unadapted for the purpose, often with inadequate equipment and in the absence of many essential materials and pieces of apparatus, without new books and without their accustomed staff, who had gone to the front, our scientific workers had to solve urgently problems thrust upon them by the war. And these problems were sometimes more difficult than those which had been solved in peacetime.

Now that the war is over one can say with satisfaction that Soviet scientists passed that severe test: they helped the front and facilitated its work in many ways.

The demands made of science were endless and varied.

Care had to be taken of the health of the soldier and the life of the wounded had to be saved. Our medicine did much in this direction. Over 70 per cent. of the wounded recovered and returned to the front. The death rate in the hospitals was but a fraction of that which prevailed in the First World War. By timely attention to wounds they learned how to prevent infection dangerous to life. Substantial successes were

achieved by new methods of treating wounded limbs (envelopment in plaster) and chest wounds. They learned to save injured eyes in a number of cases by transplantation of tissue. Very great importance was acquired in medical practice by transfusion of blood, which had been of course developed before the war but continued to be perfected. Methods were discovered of curing frozen limbs. Deficient drugs were required in vast quantities. Methods were hastily discovered and brought to their technological conclusion for the manufacture of the various sulphonamides, penicillin and other preparations.

Naturally the front presented complex and ever-growing demands in respect of all forms of armament. Soviet technique and inventive talent achieved great results in this respect. New heavy howitzers, models of new guns, anti-aircraft artillery, new naval artillery equipment, reactive weapons, new mortars, various types of automatic weapons, anti-tank guns, armour-piercing shells against the German "Ferdinands" and "Tigers"—all this was created anew in wartime by Soviet engineers working together with industry.

Soviet tanks which broke a way through for the offensive of our troops were the result of the work of our metallurgists and of the creative thought of our constructors like A. A. Morozov, J. Y. Kotin and others.

Soviet aircraft production, which expanded beyond all comparison, both qualitatively and quantitatively, during the war years was a particularly clear sign of technical progress. The machines designed by A. S. Yakovlev, S. A. Lavochkin, S. V. Ilyushin, A. N. Tupolev, V. M. Petlyakov, N. N. Polikarpov, and the aircraft engines of A. A. Mikulin, A. D. Shvetsov and V. Y. Klimov determined in many respects the strength of the Red Army. This aircraft development took place as a result of the very great and sometimes very abstract scientific work of

the old and new generations of our aero-dynamists and engineers, from N. E. Zhukovsky to S. A. Chaplygin, B. N. Yuriev, S. A. Khristianovich and others. At this point broad "university" science was unbreakably interwoven with basic military technique.

Naval construction was improved and new types of warships and naval armaments were created. In naval science we had a long tradition, the art and skill in the theory and practice of ship-building, such as that of A. N. Krylov, combined with the knowledge and ability of young engineers and constructors.

Quite special importance in the war just over devolved upon radio, on the one hand as an all-powerful method of communication, and on the other as an uncommonly effective means for discovering aircraft and other military objectives and determining their distance (radio-location). Soviet radio technique during the war introduced much that was new on its own account in this sphere by the work of Y. B. Kobzarev, A. I. Berg, B. A. Vvedensky, N. D. Papaleksi, A. L. Mintz and many other physicists and engineers.

All the main kinds of modern armaments without exception are linked with perfected and complex optics. In artillery, range-finders, panoramas, and stereo-telescopes are required; aircraft have bomb-aiming apparatus and very complex photographic lenses for aerial photography; tanks and even rifles are equipped with telescopic sights; the submarine has the periscope as one of its basic parts; and field glasses are the essential equipment of an officer. Soviet optics, in the person of its scientists, engineers and skilled workmen, honourably did its duty to the country.

During the war the Red Army never complained of its optical equipment, which it had in good quality and adequate quantity. Aircraft lenses of a new type, success-

fully applied in operations, range-finders, periscopes, telescopic sights and other optical equipment were invented, constructed and manufactured in the heart of the Mari forests by the State Optical Institute and at numerous factories of the optical industry.

Very varied demands were made of Soviet chemistry by the front and by industry. It responded to them rapidly and well. Our chemists found new methods for the production of acetone, various spirits, plastics used for transparent armament and windows in planes and tanks. Continuous work was carried on for the preparation of good (high-octane) aviation spirit. New methods of refining benzine and other oil products were discovered. Naturally a tremendous work fell to the lot of chemists engaged in the discovery of new explosives and their technology.

The war obliged us to intensify our search for, and application of, useful minerals and other natural wealth of our country. New and important deposits of coal, oil and gas were discovered; one consequence of these discoveries in particular was the re-equipment of the industry of Saratov for the use of Yelshansk (natural) gas. The supplies of this gas are so great that Moscow will shortly be making use of it, thanks to the Saratov-Moscow gas pipeline.

Much was done to ascertain the resources of the Urals by the work of a special commission headed by the then President of the Academy of Sciences, the late V. L. Komarov. Other and similar commissions worked in the Karaganda coalfield (headed by A. A. Skochinsky) and in the Volga region (E. A. Chudakov).

It is difficult to estimate at its due value the help afforded to the country in wartime by the agricultural and biological sciences, and by all who had experience and

knowledge in this sphere, from academicians to experienced and observant collective farmers.

As yet all the work done during the war is far from being summed up. It is not possible to examine and evaluate fully the assistance given to the front by Soviet science and technique. One thing is clear—that assistance was everywhere, beginning with the health of the individual soldier, the soldier's felt boots which the physico-chemists endeavoured to make waterproof during the spring thaws, to new varieties of anti-tank guns and radio-location.

The high value set upon Soviet science by the Party and the Government during the course of the war itself was expressed in numerous Stalin Prizes awarded for the best scientific and technical achievements, and in that triumph of our science which found its expression in the 220th Jubilee of the Academy of Sciences of the U.S.S.R. in June, 1945, during the great days of victory.

In the difficult months of the war, during the spring of 1942, Stalin sent two telegrams to the Academy of Sciences. "I express my confidence," said Stalin to the President of the Academy, "that, in spite of the difficult conditions of wartime, the scientific activity of the Academy will develop in step with the increased requirements of the country."

In the second telegram Stalin wrote: "I trust that the Academy of Sciences of the U.S.S.R. will take its place at the head of the innovators in the sphere of science and production, and will become a centre of foremost Soviet science in the struggle which has developed with German Fascism, the worst enemy of our people and of all other freedom-loving peoples."

The science created by the Revolution in the Soviet Academies, universities, specialised institutes, at the fac-

tories and in the fields and hospitals, justified these expectations. It did in fact develop and mobilise itself in step with the increased requirements of the country and the front. The cultural sowing of the great October Socialist Revolution bore its fruit at the time when it was most urgently needed.

V. AT THE BEGINNING OF A NEW EPOCH

The great Patriotic War culminated in a victory the dimensions and significance of which it is as yet difficult to estimate fully. The victory was won by our just cause, by the strength and patience of our people, by the genius of Stalin's leadership, by the valour and skill of the Red Army, and by our new culture with its original thought, science, and technique.

Our country and the whole world stand at present at the threshold of a new epoch. We have before us a vast effort to restore our towns and villages which were attacked, destroyed and plundered by the enemy. The fourth Five-Year Plan for the years 1946-50, recently published, is a plan for the restoration and development on a wide scale of industry, agriculture and transport. Its fulfilment will require the participation of science on a great scale. Our science will have to pass on from the military tasks of the recent past to the varied problems of Socialist construction.

The Presidium of the Academy of Sciences of the U.S.S.R. recently completed the examination of the five-year plans of its Sections which unite over 120 research institutes. Particular stress in the whole programme is laid on physics, chemistry and the technical sciences.

Physicists will continue to study the properties of matter at temperatures close to absolute zero and the high-speed, aero-dynamic processes, which are of great importance for

the development of aviation at supersonic speeds, of artillery and of other branches of engineering.

Geologists and geographers are concentrating their attention on problems relating to the Pacific Coast areas, to iron and oil deposits and to the further development of geological prognoses. A soil map and geography of the Soviet Union in many volumes will be published. Biologists will continue their studies connected with the ideas of their Russian predecessors. A number of institutes will participate in studying the structure and synthesis of proteins.

Among the problems faced by the technological Section mention should be made of the development of the theory of stability of movement and oscillation of mechanical systems, problems of the strength and steadiness of structures, problems of aero-hydro-mechanics and the development of work in the field of transmission of high-tension current.

The economy of those regions which suffered from German occupation is to be reconstructed in its entirety. But we do not intend merely to reproduce what existed before the war. To the building of new towns, new factories and new houses we shall apply our new technical resources. We have in mind the use of new building methods, new materials, new designs, new ways of lighting and heating.

The lighting of the new buildings will be radically improved. We shall be bringing fluorescent lamps into general use, which are three or four times more economical than ordinary incandescent electric lamps, and provide a light similar to daylight. The U.S.A. turns out millions of them a year. Designs suitable for manufacture in the U.S.S.R. were approved some years ago, but the war prevented us from launching their production on a large

scale. Now we can proceed with our plans. We hope to use the same lamp for street lighting, but some research will be necessary to find a type which will give satisfactory service in our winter conditions.

Problems of fuel and energy will be re-examined. Leaving on one side problems connected with the utilisation of atomic energy, which have become quite realistic since the discovery of the atomic bomb, and which give promise of an unprecedented technical revolution, we can point to fields less pretentious but of great practical importance which will repay investigation.

Gasification is one such field in which Soviet scientists are already very much at home. We shall interest ourselves in finding uses for low-calorie-content waste industrial gases, and in the development of artificial fuel and helio-technique. The main thermo-technical problem of the practical possibility of using steam under high pressure, and at high temperatures, for the purpose of creating most efficient thermic machines, is as important as ever.

There are innumerable new technical processes and devices which it will pay us to apply in industry. Modern physics, chemistry and electrical technique suggest methods which can be applied in industry to enormous advantage, and which may indeed revolutionise industrial processes.

From the apparently insignificant fact of radio-activity, discovered half a century ago, emerges the atomic bomb. Spectrum analysis, discovered in the second half of the nineteenth century and long applied only in astronomy, has become, as I mentioned earlier, one of the most convenient methods of analysis in various branches of industry.

The manufacture of cyclotrons and similar apparatus is being developed in the U.S.S.R.

The reconstruction and further development of Soviet agriculture face our agronomists and biologists with great problems of genetics, selection and agricultural chemistry. The experience of the war points the way to tremendous advances in the fields of medicine and public health. Our geologists will be fully occupied in finding new sources of building material and of raw materials for industry and agriculture. Geophysical, electric, magnetic, seismic, and other methods of survey will be extended.

The Academy's institutes will organise many scientific expeditions. In 1948 alone, over 60 expeditions will be sent out. The council for the study of the country's productive forces, headed by the prominent geologist Lev Shevynkov, will conduct large-scale prospecting in the northern Caucasus, Azerbaijan and the Urals. Geological expeditions will be sent to Central Asia, Eastern Siberia and the Far East.

Our planned economy continues to require the highest possible degree of accuracy in short-term and long-term weather forecasts. This need will provide a powerful stimulus in the realm of geophysics.

The chief astronomical observatory at Pulkovo and the Astro-Physical Observatory at Simeiz in the Crimea, which were destroyed by the Germans, are now being restored, as well as the Sevastopol Hydro-Biological Station, the Hydro-Physical Observatory of the Academy of Sciences, and several other scientific institutions.

The provision of the material basis for scientific work is an essential condition for the fulfilment of the plan of research. In the period up to 1950, over 50 large buildings will be constructed, including the main building of the Academy of Sciences and over ten new institute buildings. The main botanical garden of the Academy is being laid out in the suburbs of Moscow, over an area of 1,250 acres.

During the next five years, the Academy will considerably extend the training of scientific staff, particularly in the field of physics, chemistry and technology. At present the U.S.S.R. counts over 7,000 persons holding doctor's degree. Before 1950 the Academies of Sciences will enrol over 8,000 post-graduates, including over 500 this year.

But in assisting the realisation of the new Five-Year Plan, we shall not restrict ourselves to the natural sciences. The humanities, too, will play a considerable role, while the importance of the economic sciences is obvious at the most casual glance. The study of the history of the peoples of the Soviet Union, of their literature, folk-lore and ethnography will proceed vigorously.

Many great changes have taken place in the world in the flames of war. But I should like in conclusion to dwell on two very important tendencies, the realisation of which has always inspired the best Russian scientists. I mean the increasing of the part played by science and by democracy in the life of the peoples.

Of course Fascism has not yet been fully rooted out; its adherents are still hiding in various corners, seeking for the time being to remain unnoticed. A great work still lies ahead, one of cleansing the earth of this foulness, of completely routing the Fascist ideology. Nevertheless in many countries a new, free, democratic breeze has begun to blow, bringing the promise of happier times for exhausted humanity.

Science and technique have now acquired unheard-of importance for the whole human race. During the war years technique has changed and grown amazingly before our very eyes, solving problems which previously seemed unrealisable and simply fantastic. These amazing successes speak with one voice of one conclusion: the almost boundless power of human communities, capable—with

due effort and attention—of solving any scientific and technical problems.

But science will only serve progress when it is combined with democracy. Science is an all-powerful but two-edged weapon which, according to the hands in which it is held, may serve either for the happiness and welfare of mankind or for its destruction. In the hands of the arrogant Hitlerite bandits, science was becoming a weapon for the enslavement and destruction of the world. Our consistent Soviet democracy fully guarantees the use of science in the interests of all mankind, in the interests of peace and progress.

The scientists and scholars of the Soviet Union, our academies, universities, institutes and laboratories find themselves faced with a new task, incomparably more important than in all preceding times. Our science requires in the shortest possible time to place at the disposal of the Soviet people, of its towns, its industry, its fields, such scientific results, such resources of technique, as will permit the continuation of the great work of building a socialist society with the maximum use of our natural resources, and at the same time, with complete tranquillity and confidence that no-one will dare to interfere with our creative work.

SUMMARY OF THE 1946 SESSION OF THE ACADEMY OF SCIENCES OF THE U.S.S.R.

In the course of preparing this article we received the following information on the meeting of the session of the Academy of Sciences of the U.S.S.R., held in Moscow from July 1-5, 1946.

ON the opening day of the session the President, S. I. Vavilov, presented the Academy's five-year plan which provided for research into 697 problems. The plan had taken six months to draft, and scientists at all the Academy's institutes and departments had joined in the preliminary discussions.

"A large part of the programme," Vavilov said, "is allotted to problems of the philosophy of the modern natural sciences. Mathematics, a direct adjunct to these problems, will be called upon to help the other sciences in solving their problems.

In 1946, the age of atomic energy, radar, rocket propulsion, and telemechanics, it is hardly necessary to explain the emphasis laid on physics in our five-year programme," he added. Soviet scientists would continue their investigations into the structure of matter, the problem of elementary particles, the structure of the atomic nucleus, crystals and fluids. Particular attention would be paid to problems relating to atomic energy and cosmic rays.

Turning to chemical problems, Vavilov emphasised that in some most important fields modern chemistry merged into physics. He stressed the importance of photochemistry, electrochemistry and problems of colloid chemistry. Big tasks faced specialists in organic chemistry.

A large share in the programme of biological research was allotted to research into the nature of albumen, and into the chemico-physical principles of the vital processes.

Further, the president described the work to be done in the field of astronomy; much equipment still had to be replaced, as the Germans had looted or destroyed many observatories. Geophysicists, geologists and geographers would study the mechanics of earthquakes, and develop new geophysical methods of geological prospecting.

During the next five years scientists would study problems of mechanics, of the stability of motion and the theory of oscillations, aero-hydro-dynamics and gas dynamics. The plan provided for research into the general theory of mechanics and machines, of the durability of machines and their parts, and problems of friction and wear, as well as research in the field of super-high frequency waves.

In conclusion, Vavilov dwelt on the work to be done by historians, linguists, economists and students of law.

Reference was also made to the large sums allocated by the Government for the construction of scientific institutions and their equipment. Academicians urged increased training of new scientists and further improvement in the knowledge of institute and laboratory personnel.

After a number of additional suggestions had been made, the Academy's five-year plan was unanimously approved.

A. P. Zhdanov read a report on his recent discovery of a new type of fission of atomic nuclei caused by cosmic rays. This was a very rare phenomenon, he said. At sea level only five or six fissions per square centimetre of a thick-layer photo-plate occurred per month. The number of fissions increased rapidly at greater heights. For instance, at 21,000ft. the number was fifty times greater than at sea level.

Towards the end of 1942, he said, he had observed a sharp increase in the number of fissions produced by cosmic rays. This was apparently due to a considerable in-

crease in the stream of cosmic rays, resulting from some catastrophe in space. It was while making these observations that he had discovered the complete fission of the atom nucleus into all its component parts, protons, mesotrons and neutrons.

At a later session Pyotr Rebinder read a paper on his method of speeding up the deformation of solid bodies. Rebinder is a specialist in this sphere. His book, "Drilling Hardness Reducers," is well-known to foreign technicians.

He has proved that the addition of small quantities of certain chemicals facilitates a change in the dimensions and shape of solid bodies. The molecules of these chemicals, often called "hardness reducers," penetrate into the solid bodies and make them friable. Thus the speed of drilling in hard rock increases by 50 and more per cent. if certain salts or lubricants are added to the wash-water.

Rebinder's methods are widely used by Soviet oil and mining engineers and geological prospectors.

Papers on biological achievements were read by Vladimir Sukhachev, by Nikolaï Gamaleya (on factors of variability of bacteria), by Lena Stern (on the role of the central nervous system in regulating physiological processes), by Professor Nikolai Krasilnikov (on antibiotic properties of bacteria) and by Nikolai Burdenko (on the action of antibiotics on the carotid).

Members of the Academy's department of physical sciences heard two papers, one by Bogolyubov of the Ukrainian Academy, on "the theory of superfluidity" and the other by Professor Antonov-Romanovsky on "the post-luminescence of phosphorus crystals."

Achievements in the technical sciences were outlined by Alexander Mikulin, who read a paper on rocket propulsion engines, by Nikolai Andreyev, speaking on piezo-electric crystals, and by Nikolai Kobrinsky and Leonid Lyusternik on "contemporary calculating technique."

OUTLINE OF THE HISTORY OF THE ACADEMY OF SCIENCES

*From a speech of the late Academician V.I. Komarov,
President of the Academy of Sciences of the U.S.S.R., at
the Jubilee Session of the Academy, June 16, 1945.*

I want to devote my speech to the question of the connection between science and life, and to recall some pages in the history of the Academy of Sciences, now more than two centuries old, which will help us to understand this question.

Looking back, I clearly see three periods in the history of our Academy. The first period is linked with the names of Peter the First and Lomonosov: the 18th century. The second period covers the scientific activity of a number of the greatest astronomers, mathematicians, physicists, chemists, geologists, historians, philologists, and other specialists of the 19th and the beginning of the present centuries. The third period began over 25 years ago, when the Academy of Sciences turned its energy to the satisfaction in every possible way of the needs of Socialist construction. This was the period in which the Academy of Sciences was working on the lines broadly laid down by Lenin and Stalin.

The Academy of Sciences was the work of the hands of Peter the First. Reading now through the first documents in which is mentioned the "society of sciences" i.e., our Academy, you see how much attention Peter devoted to his child, how closely is bound up the institution of the Academy of Sciences at Petersburg with Peter's reforms, with the cultural and industrial rise of our State in the first quarter of the 18th century. During the whole of 1724, Peter was actively inviting learned men into the new Academy, concerning himself with creating conditions for

their work and formulating the tasks facing Russian science and its public centre. These tasks followed from the practical requirements of the time. Creating an army and a navy, building shipyards, mines, manufactures and commercial centres, Peter demanded a large-scale study of the natural resources of the country, necessary for Russian industry and trade. To study the contours of Russia, her surface, her rivers and lakes, her vegetable and animal world, her mineral resources and her soil, her towns and economy, the languages of her peoples, were the first tasks of Russian science. Hence follows the outstanding importance of the Russian academic expeditions of the 18th century.* The study of Russia and the composition of Russian maps, in their turn, required geodetic and astronomical observations, and therefore brought into the foreground astronomical and mathematical research. Yet, when planting in Russia a new centre of science, Peter looked very far ahead. He foresaw that Russia would one day become a country of the most advanced science. One of his contemporaries relates that in a speech addressed "to various venerable Russian personages" Peter compared the migration of scientific centres with the circulation of the blood in the human body, and asserted that, just as ancient Greece was "the abode of all the sciences," so one day Russia would become a State distinguished by the particularly rapid development of all branches of knowledge.

The seeds of scientific development were cast by Peter upon prepared soil, and very soon they gave their shoots. Only a few years after the foundation of the Petersburg Academy of Sciences, it was reckoned to be one of the most important scientific centres of Europe. The well-

* In 1725 Peter I. sent a scientific expedition to Kamchatka, to ascertain whether the Asiatic and American continents were connected.—*Editor.*

known physicist Bullfinger, one of the first Petersburg academicians, said in 1731: "Whoever wishes fundamentally to study the natural and mathematical sciences must set out for Paris, London and Petersburg. There are learned men in all branches, and store of instruments. Peter, himself acquainted with those sciences, was able to gather all that was requisite for them. He has collected an excellent store of books, costly instruments, overseas rarities of nature, works of art, in short all that has been recognised by men with knowledge as meriting respect."

During the reigns of the successors of Peter the First and Catherine the First, in the years of the Biron tyranny and later, not a few obstacles arose in the way of Russian science. Still, it broke them down. In the person of Lomonosov young Russian science rose to the peak of world natural science. Lomonosov's struggle against obsolete views on physics and chemistry, his anticipation of the modern atomic theory, his idea of development, his principles of the conservation of matter and energy, all go to constitute one of the most brilliant pages in the history of science.

The first period of existence of our Academy of Sciences is so closely bound up with the history, content and results of the activity of Lomonosov that it may justly be called the Lomonosov period.

What then are the most characteristic features of this Lomonosov period in the history of the Academy of Sciences? Above all, it is the encyclopaedic character of scientific work. In all the variety of spheres in which the academicians were active they strove for the rational explanation of facts. Human reason, liberated from medieval scholasticism, would not recognise any external authority. For natural science at that time this meant an attempt to give a mechanical explana-

tion of nature. If we turn over the pages of academic journals in the middle of the 18th century, we shall see how many bold mechanical hypotheses were put forward by the Petersburg academicians to explain gravitation, heat, electricity and even biological phenomena. In very truth, the 18th century was the age of reason—reason which broke down every obstacle, and which sought to explain everything in nature in rational fashion. Reason was to explain everything; otherwise it did not fulfil its main task of liberating human thought from the fetters of old traditions. Hence it was that the mechanical natural science of the 18th century found itself so closely bound up with the encyclopaedism of its founders.

In Russia the most many-sided thinker of the Lomonosov period was Lomonosov himself. In addition to the general reasons for this, nature in Russia herself, and the requirements of Russian life, compelled a universal embracing of all branches of knowledge. Russia comprises such varied climatic and botanical zones, she is so diverse in her geology, her geography and ethnography, that nature itself imposed an encyclopaedic outlook upon her investigators. But the nature of Russia had always been manifold: why then did it present this demand only in the 18th century? At that time the practical requirements of this vast country were giving rise to diversified scientific problems. Take for example the Arctic researches of Lomonosov. They followed from the essential economic and technical requirements of Russia. They included an historical analysis of voyages across the Northern Arctic Ocean, economic and demographical calculations, geological and geophysical hypotheses, researches and hypotheses connected with the theory of heat, physico-chemical experiments, researches in the sphere of atmospheric electricity (the Northern Lights) and much else.

I want to mention one other particular feature of the life of the Academy of Sciences in the 18th century. At that time the Academy was not a scientific centre in the modern sense. It was not surrounded by a periphery of many other scientific institutions. The encyclopaedic activity of the first academicians did not necessitate a division of labour between a large number of specialised scientific institutions. It was in the following period that the situation changed radically.

If the 18th century was the period of the encyclopaedists, a period of struggle for a rational outlook on the world, the 19th century was the age of positive achievements in the various branches of science. This difference was well formulated on one occasion by Timiryazev. In 1886 European science was celebrating the centenary of the birth of the great French chemist, Chevreul, who, born in the 18th century, became one of the greatest scientists of the nineteenth. In his address to Chevreul Timiryazev said: "A child of the age of reason, you became the living embodiment of the age of science."

And truly, in the 19th century, science, which had become differentiated, accumulated vast stores of knowledge in all spheres, and this left a tangible impression on all sides of the life of men. The differentiation of science was the pre-requisite of its progress. For the 19th century, therefore, the separating-out and formation of new branches of science is particularly characteristic. In our Academy in the 19th century there arose many new branches of science. Among the large number of new studies very many were the result of the activity of Russian academicians. However, the total contribution of Russian scientists of the 19th century to world knowledge was greater than the contribution of

the Academy. Russian science was already developing outside the walls of the Academy—developing widely and bearing notable fruit. In the 19th century, on at least two occasions, a big social advance became the point of departure for the flowering of natural science. In the first half of the century the Patriotic War of 1812, the awakening of Russian society and the movement of the Decembrists gave such an impetus to the Russian scientific genius as raised Russian scientists to the peak of world scientific thought. In the second half of the century, the sixties and the following years were marked by the activity of an entire constellation of great Russian naturalists, among whom Mendeleyev, Mechnikov, and Sechenov were thinkers of world significance.

At this time the Academy of Science shone by its work in all fields of knowledge, and continued to be one of the main centres of world scientific thought. Such mathematicians as Chebyshev and Ostrogradsky, such chemists as Butlerov, creator of a structural theory of organic compounds, made the Academy famous. But in the 19th century science in Russia, as I said, developed outside the Academy as well. A number of the greatest and most advanced scientists did not find their way into the Academy. The most daring innovator in mathematics, Lobachevsky, was not recognised by academic science. One of the greatest chemists of the last century, Mendeleyev, was not an academician owing to the resistance of the "German group." The latter was headed by reactionaries who deliberately prevented the penetration into the Academy of men connected with the Russian people. The greatest Russian biologists Timiryazev, Sechenov, and Mechnikov, the physicists Stoletov and Lebedev, were also never academicians. A number of the best representatives of scientific thought, men of

whom our people are proud, remained outside the walls of the Academy.*

However, on the threshold between the 19th and 20th centuries the Russian Academy of Sciences was a source from which sprang such noteworthy currents in present-day science as evolutionary embryology, the theory of conditioned reflexes, geochemistry, etc. The names of Kovalevsky, Pavlov, Karpinsky, Vernadsky are those of classics of modern natural science. In the sphere of the humanities, the Academy became famous for the remarkable works of Marr, creator of the most modern theory of language, for researches into the history and philology of the Slav peoples, and for the profound and brilliant historical investigations of Solovyov and Klyuchevsky. . .

If we compare the present, third period in the history of the Academy of Sciences† with its predecessors, we shall see that the most characteristic feature of creative scientific work in our days is neither the encyclopaedism of the eighteenth century nor the differentiation of the nineteenth, but combination in the working out of scientific problems. Great problems of the present day are solved by the joint effort of learned specialists in varied fields. That is why the association of scientists, and their coming together on a scale covering the whole State, are

* In 1903, Maxim Gorky was struck out of the list of Honorary Members of the Academy by Nicholas II. for his Socialist activities, and the writers Chekhov and Korolenko resigned their honorary membership in protest.—*Editor.*

† In 1917 its name was changed from "Imperial Academy," to "Russian Academy," and for the first time in its history it elected its own President—A. P. Karpinsky—instead of having him appointed by the Tsar. In 1925 its title became "Academy of Sciences of the U.S.S.R."—*Editor.*

so important. It is our Academy of Sciences which has become the centre for bringing them together.*

The years of war have been a test imposed by history upon the scientific capacity of the Academy of Sciences of the U.S.S.R. May I dwell for a moment on the work done by the Academy of Sciences in these years? You know that one of the premises of victory was the successful development of Soviet industry in the East. The Urals held a special place in the war industry of the Soviet Union. The Urals are a land most rich in iron, non-ferrous and light metals, fuel and chemical resources. This backbone, spread out along the meridian, parallel to the front and from one to two thousand kilometres distant from it, forms as it were mighty line of economic defences, a line of richest mineral resources, ores, works and power stations, built up during the three Five-Year Plans.

At the beginning of the Patriotic War Soviet industry was to a considerable extent transported to the Urals. The success of this transplantation of hundreds of works, tens of thousands of machine-tools and millions of workmen, never before witnessed, will always remain interesting and instructive in the highest degree for the historian. In this great effort science played an essential part. The Academy of Sciences of the U.S.S.R. took the most extensive part in mobilising the resources of the country. The Academy of Sciences set up a commission for the mobilisation of the resources of the Urals and other eastern districts, over which I had the honour to preside

* During the twenty years from 1920 to 1945 the Academy sent out over 500 learned expeditions, composed of scientists in various fields, to study mineral and power resources, etc., in various parts of the U.S.S.R. Almost every chemical element has now been found to exist in Soviet territory.—*Editor.*

in 1941-1948.* This commission planned in detail immediate measures affecting heavy and non-ferrous metallurgy, power, transport, the production of building materials and agriculture.

During all my fifty years of scientific activity I have never experienced such deep moral satisfaction as when I was working at the mobilisation of the inexhaustible resources of our great country in the cause of defence. Never yet has there been among scientists such a vast creative enthusiasm. It embraced all spheres of Soviet science. Soviet physicists were bringing into being the theoretical and experimental pre-requisites for the building of new forms of armament. Mathematicians were working out methods of most rapid calculation for the needs of the artillery, the air force and the fighting ships. Chemists discovered new methods of producing explosives, alloys, pharmaceutical requirements. Biologists discovered additional food resources for the Red Army and the people. Doctors by their new methods of war medicine saved tens of thousands of the precious lives of our soldiers. We take pride that in our work we gave all the help in our power to our heroic Red Army and Navy, who crushed the German Fascist invaders. . . .

During the war our international scientific connections have expanded and grown stronger: uniting against Hitlerism, the democratic countries called science to the aid of the great cause of emancipation. In this struggle against Fascist Germany, the science of the anti-Hitler coalition was relying upon its historic traditions. The science of the freedom-loving nations grew up under the banner of democracy and progress.

* Professor Komarov had conferred on him the title of "Hero of Socialist Labour"—the highest civilian distinction of the U.S.S.R.—for this work.—*Editor.*

The ideas of freedom and democracy were the guiding star of the foremost elements of English society in the age when modern English natural science came into being. Freedom of scientific creative work was the guiding principle of that scientific centre of Europe, the Royal Society of London. It was democratic, freedom-loving ideas that inspired the work of such men of genius as Bacon, Newton, Faraday, Maxwell, Darwin and other British scientists.

Russian science is historically linked with British. The works of Darwin met in Russia with a tremendous scientific and public response.* Darwin himself took an interest in the first steps of the brilliant constellation of Russian Darwinists, while to-day Darwinism has found its second country in the U.S.S.R. British science always placed a high value upon the work of Mendeleyev, Timiryazev, Pavlov, Lebedev and other outstanding figures in Russian natural science. In the days of the great Patriotic War Soviet scientists have striven to reinforce and expand their connections with British science.

American natural science is also penetrated with progressive ideas. The first great American naturalist, who investigated atmospheric electricity and built the lightning-conductor, Benjamin Franklin, was a fighter for liberty. "He took lightning from the sky and power from tyrants," runs the epitaph over Franklin's tomb. An example of the historic scientific connection between Russia and America were the physical works of Lomonosov, who continued the investigations of Franklin. The Academy of Sciences cherishes these traditions and strives to extend its links with American science.

The same traditional bonds of friendship unite us with French science: we remember how France met the

* Darwin was elected a corresponding member of the Academy of Sciences.—*Editor.*

works of Chebyshev, Mechnikov, Vernadsky. Close friendship again binds us together with the scientists of the Slav States.

We remember the past and we look into the future. Before us is a great era of work. I will permit myself to express my confidence that in the new conditions of world prosperity Soviet science* will adorn our people with new discoveries, worthy of the great Stalin epoch.

* The Academy of Sciences in 1946 comprises some 150 learned institutions, including 53 research institutes, 16 independent laboratories, 6 observatories, 35 stations and 15 museums—apart from the branches and the independent Academies listed on pp. 87 and 88, and 4 territorial research stations in the Komi Autonomous Soviet Socialist Republic, in the Kola Peninsula, in the Far East, and at Archangel. There are 144 full members and 201 corresponding members, the latter including eminent foreign scientists. The two main libraries of the Academy comprise 8 million volumes, and the 71 libraries of its specialised institutions another 2,900,000 volumes. Its scientific staff numbers 4,213.—*Editor.*

FROM THE STATUTES OF THE ACADEMY OF SCIENCES OF THE U.S.S.R.

1. The Academy of Sciences of the U.S.S.R. is the highest scientific institution of the U.S.S.R., bringing together the most outstanding scientists of the country. The Academy of Sciences is subordinated directly to the Council of Ministers of the Union of Soviet Socialist Republics, and presents an annual report of its activity to that body.

2. The main purpose of the Academy of Sciences is to promote in every possible way the general progress of both theoretical and applied knowledge in the U.S.S.R., the study and development of the achievements of world scientific thought. The Academy of Sciences found its work upon the planned utilisation of scientific achievement to assist in the building of a new Socialist classless society.

3. In order to carry out this fundamental task, the Academy of Sciences:

(a) concentrates its work upon the most considerable and decisive problems of science in all its branches;

(b) studies the natural resources and productive forces of the country, and likewise the cultural and economic achievements of mankind, and promotes their timely and rational use;

(c) promotes the improvement of the qualifications of scientific workers of the U.S.S.R.;

(d) assists the highest government bodies of the U.S.S.R. by organising expert scientific opinion.

4. The Academy of Sciences of the U.S.S.R. consists of eight sections: the Section of Physical and Mathe-

mathematical Sciences, the Section of Chemical Sciences, the Section of Geological and Geographical Sciences, the Section of Biological Sciences, the Section of Technical Sciences, the Section of History and Philosophy, the section of Economics and Law, the Section of Literature and Language.

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10. The Academy of Sciences consists of members (Academicians), honorary members, corresponding members and the basic staff of scientific workers engaged in the institutions of the Academy of Sciences.

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25. The highest body of the Academy of Sciences is the General Meeting, consisting of all the members and honorary members of the Academy of Sciences.

26. The General Meeting lays down general lines for the scientific work of the Academy of Sciences and its component parts and decides basic questions of an organisational character, hears reports both of the branches and institutions of the Academy of Sciences and of its individual members, discusses problems of a scientific, scientific-technical and scientific-social character, elects honorary members, members and the Presidium of the Academy of Sciences and confirms the election of corresponding members of the Academy of Sciences.

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35. The Presidium gives effect to the decisions of the General Meeting, and between General Meetings is the highest directing body of the Academy of Sciences. The Presidium reports on the most important decision it has taken at the next session of the General Meeting.

ACADEMIES OF SCIENCES IN THE UNION REPUBLICS

Union Republic	Founded as Branch of Academy of Sciences of U.S.S.R.	Became independent Academy	Where Situatd	President
Ukraine	—	1920	Kiev	A. A. Bogomoletz (died July, 1946) K. V. Gorev
Byelorussia	—	1928	Minsk	
Lithuania	—	1940	Vilnius	J. Matulis
Georgia	1932	1941	Tbilisi	N. I. Muskhelishvili
Armenia	1936	1943	Erevan	J. A. Orbeli
Uzbekistan	1940	1943	Tashkent	T. M. Kary-Niyazov
Azerbaijan	1932	1945	Baku	M. Mir-Kasimov
Kazakhstan	1932	1945	Alma-Ata	K. I. Satpayev
Latvia	—	1946	Riga	J. Leinsh
Estonia	—	1946	Tallinn	H. Kruus

BRANCHES OF THE ACADEMY OF SCIENCES OF THE U.S.S.R.

Founded	Republic or Zone	President	Situated in	Institutes
1932	Tadjik S.S.R.	E. N. Pavlovsky (academician)	Stalinabad	1—Geological; 2—Zoological; 3—Stock-breeding; 4—Botanical; 5—Historical, Literary and Philological; and several observatories, stations, laboratories, etc.
1933	Urals	I. P. Bardin (academician)	Sverdlovsk	1—Mining and Geological; 2—Chemical; 3—Metallurgical; 4—Biological; and an experimental station.
1941	Turkmen S.S.R.	B. A. Keller (academician)	Ashkhabad	1—Geological; 2—Botanical; 3—Zoological; 4—Physico-Technical; 5—Historical, Literary and Philological; and several experimental stations.
1943	Kirgiz S.S.R.	K. I. Skryabin (academician)	Frunse	1—Geological; 2—Chemical; 3—Biological; 4—Historical, Literary and Philological; 5—Museum of Kirgiz national culture.
1944	West Siberia	A. A. Skochinsky (academician)	Novosibirsk	1—Geological and Mining; 2—Biological and Medical; 3—Chemical and Metallurgical; 4—Transport and power.
1945	Middle Volga	A. Y. Arbusov	Kazan	1—Chemical; 2—Biological; 3—Physico-Technical; 4—Water Power; 5—Historical, Literary and Philological.

**BRITISH AND AMERICAN MEMBERS OF THE
ACADEMY OF SCIENCES OF THE U.S.S.R.**

GREAT BRITAIN

Honorary Members

MAX BORN. Edinburgh. Speciality: Physics. Elected in 1925.

GODFREY HAROLD HARVEY. Cambridge. Speciality: Geometry. Elected in 1984.

FREDERICK HOPKINS. Cambridge. Speciality: Biochemistry. Elected in 1984.

ERWIN SCHRODINGER. Oxford, Dublin. Speciality: Physics. Elected in 1984.

SIR HENRY HALLET DALE. London. Speciality: Physiology. Elected in 1942.

JOHN BURDON SANDERSON HALDANE. Rothamsted, Harpenden. Speciality: Biology. Elected in 1942.

Corresponding Members.

SIR CHARLES SCOTT SHERRINGTON. Cambridge. Speciality: Physiology. Elected in 1915.

FRANCIS WILLIAM ASTON. Cambridge. Speciality: Chemistry. Elected in 1924.

EDWIN STEPHEN GOODRICH. Oxford. Speciality: Zoology. Elected in 1924.

FREDERICK SODDY. Oxford. Speciality: Chemistry. Elected in 1924.

FREDERICK WILLIAM THOMAS. Oxford. Speciality: Indology. Elected in 1924.

REGINALD ALDWORTH DALY. London and Cambridge. Speciality: Geology. Elected in 1929.

- PAUL ADRIEN MAURICE DIRAC.** Cambridge. Speciality: Physics. Elected in 1981.
- DAVID MEREDITH SEARES WATSON.** London, Speciality: Palaeontology. Elected in 1982.
- CHARLES ROCKWELL LANMAN.** London and Cambridge. Speciality: Indology. Elected in 1982.

UNITED STATES OF AMERICA

Honorary Members

- ALBERT EINSTEIN.** Princeton, N. J. Speciality: Mathematics. Elected in 1927.
- ROBERT WILLIAMS WOOD.** Baltimore. Speciality: Physics. Elected in 1930.
- LELAND OSSIAN HOWARD.** Washington, D.C. Speciality: Zoology and Anatomy. Elected in 1980.
- THOMAS HUNT MORGAN.** Pasadena, Calif. Speciality: Genetics. Elected in 1982.
- WALTER BRADFORD CANNON.** Cambridge, Mass. Speciality: Physiology. Elected in 1942.
- ERNEST LAWRENCE.** Berkeley, Calif. Speciality: Physics. Elected in 1942.
- GILBERT NEWTON LEWIS.** Berkeley, Calif. Speciality: Chemistry. Elected in 1942.

Corresponding Members.

- HERBERT SPENCER JENNINGS.** Los Angeles, Calif. Speciality: Zoology. Elected in 1924.
- WILLIAM WALLACE CAMPBELL.** Berkeley, Calif. Speciality: Astronomy. Elected in 1924.
- HERBERT VINCENT NEAL.** Boston, Mass. Speciality: Zoology. Elected in 1924.
- JAMES FRANCK.** Chicago, Ill. Speciality: Physics. Elected in 1927.
- HERMANN JOSEPH MULLER.** Amherst, Mass. Speciality: Genetics. Elected in 1988.

APPENDIX

STALIN PRIZES FOR SCIENTIFIC ACHIEVEMENTS

Stalin Prizes were instituted by the Soviet Government in 1939 in honour of the 60th birthday of Joseph Stalin. That year 94 awards were established, but later the number was increased considerably.

The Government has awarded the title of Stalin Prize-Winner (Stalin Laureate) together with large monetary awards (up to 200,000 roubles) to outstanding scientists, inventors, designers, writers, poets, musicians, painters, sculptors, actors and others.

The awarding of the Stalin Prizes has become an annual national event, a celebration and a review of Soviet culture. Stalin Prizes, which aim at fostering the creative spirit in all fields of science and art, are given to innovators who have distinguished themselves by their creative daring and blazed new paths in science, literature, art, industry. The prizes are bestowed by the Council of People's Commissars of the U.S.S.R., but before this is done the services of the candidates for Stalin Prizes are generally considered by the people. Candidates for Stalin Prizes are nominated by scientific, cultural and public organisations; the value of their work is judged by outstanding authorities in the various fields of science, literature and art. The names of those people adjudged Stalin Prize winners are given wide publicity in the press.

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In the three years 1941-43, Stalin Prizes were awarded to people in various walks of life, from academician to worker.

Among the Stalin Prize recipients for these years we find the names of Academicians P. Kapitza and M. Pavlov, known to the whole scientific world. Side by side with them we have the steel-worker I. Valeyev of the Urals Machine Building Plant, I. Zavertailo, a miner, and S. Davydov, tool-maker of the Stalin Automobile Plant of Moscow.

Academician Kapitza has received the prize twice, once for his method of obtaining liquid air and liquid oxygen, and the second time for his discovery and study of the super-fluidity of liquid helium. Academician Pavlov, founder and leader of the Soviet school of metallurgists, who has trained many engineers and scientific workers, is the author of the classical work, "The Metallurgy of Cast Iron."

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Soviet scientists and technologists whose names appeared on the list of Stalin Prize awards for 1943-44 include the following:

A Stalin Prize was awarded to the team of physicists headed by Academician S. I. Vavilov for outstanding discoveries and investigations of the motion of electrons in a dense medium with a velocity greater than that of light in that medium.

A prize of 100,000 roubles was awarded to Konstantin Petrovich Petrzhak, senior scientist of the Radium Institute of the Academy of Sciences of the U.S.S.R.; and to Georgi Nikolayevich Ferlov, senior scientist of the Academy of Sciences of the U.S.S.R. for the discovery of the phenomenon of the spontaneous disintegration of uranium atoms.

The young Soviet astro-physicist V.A. Ambartsumian, Vice-President of the Armenian Academy of Sciences, has been honoured for his new theory of the diffusion of light in turbid media. This research work is of great importance

for the solution of a number of astro-physical problems, and for obtaining visibility under water, in fog, and so on.

A Stalin Prize has been awarded to the eminent mathematician M. A. Lavrentyev, Vice-President of the Ukrainian Academy of Sciences, for evolving a new mathematical method for solving non-linear problems in the field of differential equations with partial derivatives. This method has had a wide application in solving various problems of hydro—and aero—mechanics and is of great interest for Soviet aviation.

Academician Rodionov has won an award for his achievements in the field of chemistry, especially for his work on the synthesis of amino-acids and complex heterocyclic compounds. Academician A. N. Terenin has been awarded a first-class prize for his researches on photochemical processes.

Professor Bykov of the Naval Medical Academy received a prize for his work on "the cerebral cortex and internal organs." He has developed the teachings of the famous Russian biologist Pavlov on higher nervous activity, opening up a new sphere in physiology.

One of the most interesting awards in the field of technological sciences was that to the team headed by Professor Aseyev of the Leningrad Mining Institute. Aseyev's team conducted research on ores essential to non-ferrous metallurgy, in particular copper and nickel ores, and evolved new methods of concentrating these ores and of smelting metal from them.

Rear-Admiral Papkovich, corresponding member of the Academy of Sciences, has been awarded a prize for his two-volume work on "The Mechanics of Shipbuilding." Professors Drednitsyn and Loytsyansky received prizes for outstanding work in the field of aero-dynamics.

A prize has been conferred on the team of engineers headed by N. P. Ivanov who was responsible for the power-

ful hydro-turbines and generators installed at the Sheksna and Uglich hydro-electric power stations of the Upper-Volga network. The 55,000 kilowatt turbine produced by this team is the most powerful of its type in the world.

A group of prize-winners headed by M. I. Grinberg produced a new turbo-generator with a capacity of 100,000 kilowatts, making 3,000 revolutions per minute.

For creating new models of high-speed and powerful diesel engines for vessels, a Stalin Prize has been awarded to the team of engineers working under Kuzynkin and Matveyev.

Many geologists were among the prize-winners. Yero-feyev has been honoured for his discoveries of new deposits of tin; Karzhavin, for creating an aluminium base in the Urals, Yengurazov and Kuznetsov were responsible for exploring and exploiting the Yelshansk sources of natural gas near Saratov.

Among the representatives of medical science in the list of awards is professor Voino-Yasenetsky, consulting surgeon to the evacuation hospitals of the Tambov Region, who has been honoured for his work on new surgical methods in healing septic diseases and wounds. Prizes were also conferred on Professor Bayandurov of the Tomsk Medical Institute and Professor Rauer of the Central Institute for doctors.

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For outstanding scientific work in 1945, the following were among those to whom Stalin Prizes were awarded.

One first prize of 200,000 roubles and four second prizes of 100,000 roubles have been awarded for work in physics and mathematics. The first prize went to Ivan Vasilyevich Obreimov, corresponding member of the Soviet Academy of Sciences and Director of the Academy's organic chemistry laboratory, for work in the sphere of optics and

crystal physics, contained in a paper published last year on the application of Fresnel diffraction to physical and technical measurements.

A second prize has been awarded for the discovery of new forms of fission of atomic nuclei caused by cosmic rays. It went to Dr. A. P. Zhdanov for work described in his paper "Anomalous Fission of the Nuclei of Bromine and Silver by Cosmic Rays," published in 1945.

Corresponding member of the Academy of Sciences N. M. Vul, director of the "Lebedev" physics laboratory, won a second prize for the discovery and investigation of super-high dielectric permeability of titanate of barium. His results were published in four papers last year; on the dielectric permeability of the titanates of metals of the second group, and on the dielectric permeability of barium titanate as a function of pressure, as a function of tension in an alternating field, and at low temperatures.

M. S. Molodentsky, of the Central Institute of Geodesy, Aerial Photography and Cartography, won a second prize for his work on "Basic Questions of Geodetic Gravimetry"; and Dr. A. I. Maltsev, of the "Steklov" Mathematical Institute, for four mathematical papers on the theory of groups: "The Semi-Simple Sub-groups of the Li-Groups," "The Commutative Sub-Algebras of Semi-Simple Li-Algebras," "On the Solvable Li-Algebras," and "On the Theory of Li-Groups as a Whole," all published in 1945.

For chemistry, a first prize of 200,000 roubles was awarded to Professor I. N. Nazarov, director of the laboratory of the Soviet Academy's Institute of Organic Chemistry, for research on acetylene and its derivatives, described in paper published in 1945.

Work on the physiology of the higher nervous system wins a first prize (200,000 roubles) for the director of the laboratory of the "Pavlov" Institute of Physiology, Dr. Maria Petrova.

Three first prizes (200,000 roubles each) were awarded for medical research. One went to Professor D.M.Zhdanov corresponding member of the Academy of Medical Sciences, for work on the anatomy of the lactile duct and the main lymphatic collectors. The other two went to N. L. Polenov, director of the Leningrad Neuro-Surgical Institute, and Dr. A. V. Bandurchuk, of the same institute, for research on neuro-surgery and the elaboration of an original operation.

In the sphere of history and philology, first prizes of 200,000 roubles have been awarded to the authors of volumes 2 and 3 of "The History of Diplomacy," published in 1945: Academicians V. P. Potemkin and E. V. Tarle, Professor V. M. Khvostov, and corresponding members of the Soviet Academy, I. I. Minz and Anna Pankratova. also wins a first prize of 200,000 roubles for work on philology.

LITERATURE

WRITERS AND READERS IN THE U.S.S.R.

SINCE June, 1941, a number of Soviet writers have become very well known in Great Britain. Prior to the war the only one whose name was known outside a small circle was Mikhail Sholokhov, whose Cossack trilogy, commencing with *Quiet Flows the Don*, had enjoyed considerable popularity. That popularity remains undiminished and, despite constant reprinting, the works of Sholokhov are more often out of print than in.

Meanwhile other Soviet names have become equally well known—particularly that of Ilya Ehrenburg, whose war despatches published in a wide variety of newspapers attracted a great deal of attention, and whose novel *The Fall of Paris* was a best seller around Christmas, 1942. This article is intended to give a picture of what kind of books are being written and read in the U.S.S.R. today, and to tell you something of the part the Soviet writers are playing in their country's war effort.

WRITING ABOUT THE WAR

Many Soviet writers are serving as front line correspondents in the Red Army and Navy, representing *Pravda* and *Izvestia*, and the official service newspapers, *Red Star* and *Red Fleet*. They have stayed behind the German lines with guerilla detachments and Red Army Units that had got cut off, in order to report on Soviet resistance in the rear of the enemy; they have taken part in the defence of Moscow, Leningrad, Sevastopol and Stalingrad; they have accompanied commando raids by Black Sea fleet marines. Here are a few such war biographies.

A. Polyakov, *Red Star* correspondent, left for the front the moment the first news was received of the German invasion.

He was attached to a Red Army unit commanded by Major-General Galitsky, which was later cut off by German tanks and surrounded. It succeeded, however, in fighting its way out of encirclement and making its way back to the Soviet lines—one of the first of a whole series of such exploits which gave rise to the Soviet military saying:

"The Red Army does not know the meaning of the word encirclement; it refuses to recognise the existence of such a state of affairs as being surrounded."

Later, Polyakov accompanied five of the famous heavy K. V. tanks from their factory and training ground deep in the interior to their first engagements with the enemy on the shores of Lake Ilmen and the Staraya Russa area. He himself lived and worked with the tank crews and rode into action with them throughout a whole series of complicated and hazardous operations. His description of this was published under the title of *Westbound Tanks*.

The life of a Soviet war correspondent is subject to just as many risks as that of a front-line soldier: when he goes into action he stays there with the unit to which he is attached. Polyakov, alas, was killed last year in action.

Later in the same year, Soviet literature suffered a heavy loss with the death on active service at Sevastopol of Eugen Petrov, author, in collaboration with Ilya Ilf, of two sparkling satirical novels: *The Little Golden Calf* and *Diamonds to Sit On*, and a delightful and strikingly original travel book, *One Storied America*.

Petrov had had no previous experience as a military correspondent. In November, 1941, he toured the Mozhaisk and Volokolamsk sectors of the Moscow front and wrote a series of reportage sketches published in collected form as *Moscow at Our Backs*.

He was present at the recapture of Klin and described the revolting havoc which the Nazis wrought at the Tchaikovsky Museum. During the spring and summer of

1942, Petrov saw service with the garrison of Sevastopol and the Black Sea fleet which kept it supplied throughout the siege. In a characteristic sketch written shortly before his death, he described his experience on board a destroyer which was ferrying a detachment of Siberian troops from a Black Sea port to reinforce the Sevastopol garrison.

Some of the Siberians had never been to sea before; one of them, in the middle of a particularly severe attack by Nazi dive-bombers, said:

"It's not so different from the steppe, but if only it would stop moving up and down!"

A young Soviet writer who has seen service all along the entire length of the 1,500-mile front is Konstantin Simonov, author of the play *The Russians*, produced by Tyrone Guthrie and performed by the Old Vic Company at the playhouse Theatre in London this season.

Simonov has been in action against the fascist Finns in the woods around Lake Petsamo; the Red Army unit he was with was one of the last to leave Odessa, and he was very nearly captured during the evacuation of the Kerch isthmus.

A volume of his collected sketches and front-line dispatches has recently been published under the title *From the Black Sea to the Barents Sea*. He writes with almost phenomenal speed and under conditions which would make the average war correspondent, accustomed to the minimum amenities of a typewriter and a packing case, despair.

REPORTAGE

One of the effects of front line conditions on the writer—and in the U.S.S.R. front line conditions apply to cities such as Leningrad and Stalingrad, also Moscow during the critical autumn months of 1941—has

been to engender widespread use of the reportage form. The type of descriptive sketch to which the Americans originally gave the term reportage, has been defined as applying "fictional form to the reporting of fact." i.e., taking an incident, or piece of life, and writing it up as if it were a short story, but without taking any liberties with the facts.

It is of course particularly suitable for the writer in time of war when reality abounds in anecdotes all of which are set against the common background of tremendous and tragic experience. It is particularly suitable also because it serves to get it down on paper quickly while it's hot, so to speak, rather than save it up in the cold storage of the mind or the notebook.

In war, when events often move too fast for the novelist to get his material in perspective, the reportage form is invaluable. Its results are seldom without, at any rate, a documentary value, and in the hands of a master it can produce really fine writings.

During the war Soviet writers are turning out a tremendous number of these reportage sketches. Tikhonov, Sobolev, Savich, Rubinstein, Pavlenko, Wassilewska, Panferov, Grossmann, Krieger, the list could be extended almost indefinitely.

Subjects range from incidents at the front or behind the enemy's lines with the guerilla detachments, to domestic vignettes of everyday life in cities far removed in space from the front line. Wherever the setting, however, the war is always there. No need to introduce it in order to satisfy the requirements of home front propaganda.

Here, then, is a selection of a few typical collections of these reportage sketches, out of the many which have been published in volume form in the U.S.S.R.

The Soul of the Sea, by Leonid Sobolev (awarded a Stalin prize for 1942), who is a young writer, little known

before the war. He has been serving as a correspondent with the Red Navy. He has a vivid descriptive touch and at times, a rather surprising vein of sensitivity.

Tales of Leningrad, by Nikolai Tikhonov, the well-known Soviet poet. These were all written during the 1941-42 period of Leningrad's defence. Tikhonov, together with other Soviet writers, including Zoshchenko, whose short stories are well-known in this country, and Shostakovich the composer, is a native of Leningrad and has stuck it out in his native city throughout the siege, doing A.R.P. work. Zoshchenko was an air raid warden; Shostakovich a fireman.

Tikhonov's stories in this little book have a curiously unexpected, defiant lyrical note skilfully introduced into the factual account.

The People Immortal, by Vassili Grossman, leading *Red Star* correspondent with a particularly clear, distinctive style. This collection deals mainly with the Red Army in Action.

Russia at War, by Ilya Ehrenburg. This is a selection from his articles published in the Soviet Press between July, 1941, and April, 1942. J. B. Priestley writes as follows in the preface to the English edition:

"They seem to me the best writing of their kind that the United Nations can show.....what distinguishes Ehrenburg's work, raising it high above the ordinary level of war propaganda is the use it makes of significant detail, for which Ehrenburg has a sharp, trained eye, and its bitter and ruthless wit.....There is no shadow-boxing here; every blow gets home. You are made to feel in truth that he is writing in a hurry, with his typewriter resting on a packing-case and the world about him in blazing ruins."

SOME WARTIME SOVIET NOVELISTS

The outstanding novel dealing with the war on Soviet territory to have been published in the U.S.S.R. last year is probably Wanda Wassilewska's *Rainbow*. This

describes a few weeks in the life of a German occupied village in the Ukraine. They are, as it happens, the last few weeks before a Red Army counter-attack which liberates the village and those of its inhabitants who have survived the struggle against German occupation and a terror whose brutality has been becoming incessantly hideous as the tension grows.

This book gives you real hell. I know of no other novel which has provided such a powerful, realistic and sincere description of Nazi terror in action. In addition, it has a genuine, unforcedly earthly feeling for the Ukrainian countryside.

Wassilewska herself is of Polish origin, and married to the Ukrainian playwright Alexander Korneichuk, author of *Guerillas of the Ukrainian Steppes* and *The Front*, and this year appointed one of the Deputy Commissars for Foreign Affairs.

She, too, has been serving as a front-line correspondent. Indeed, she has been awarded senior officer's rank in the Red Army. She has herself been behind the German lines, and the events she describes in *Rainbow* she has herself witnessed at first hand and at great danger to her life.

Wanda Wassilewska is one of the best-known personalities in the Soviet Union, not alone for her writing, but for her manifold political activities. She was one of the most active spirits in convening the Soviet Women's Anti-Fascist Conferences, and also the very successful All-Slav Conferences. But today her name is famous—above all these things—as the inspirer and President of the Union of Polish Patriots in the U.S.S.R.

Sholokhov has been at the front (indeed at one time, when the authorities were nervous about his safety, they had considerable difficulty in getting him away from it) and written several newspaper stories and a couple of ex-

cellent short stories: *Down South* and *The Science of Hatred*, which gives an agonising account of the experiences of a Red Army officer who was captured by the Nazis but managed to escape. He is at present finishing a new novel with a war setting.

An important literary event last year was the publication of the completed long novel by Alexei Tolstoy, entitled *The Road to Calvary*. The first two parts of this were published in this country some years ago under the title *Darkness and Dawn*.

This is certainly Alexei Tolstoy's finest work and the one on which his great reputation in the U.S.S.R. as a novelist is based. Together with Sholokhov's novels of the Don, it represents the most massive achievements of Soviet fiction.

The title is taken from the name of a 12th century legend of Ancient Russia, telling of the journey of the Mother of God into hell where she witnessed the punishment of sinners. The first part, entitled *The Sisters*, describes the life of the Russian intelligentsia on the eve of the first world war, the war itself and the Russian Revolution of 1917. The second part 1918, portrays the initial stages of the Russian civil war, when

"the Soviet Republic, so its enemies thought, was doomed to fall in the very near future. But the Republic mustered the full force of its mind and science, and rallied the spiritual and material strength of the nation to launch an attack."

The last part, *Sullen Morning*, carries forward the story of the mobilisation of Soviet-Russian might and ends with an account of the solemn session of the Supreme Soviet which adopts the plan for peaceful construction. The principal characters are representative of the Russian intelligentsia. It is interesting to note that when the first volume appeared it was read by only a limited number of intellectuals, but was regarded as "too highbrow" by the

mass of the reading public. The full trilogy, however, is now being eagerly read by millions.

Tolstoy has also been writing articles for the Soviet press and doing a good deal of broadcasting on Moscow Radio, a popular feature of which is readings either by Soviet authors or by well-known actors of extracts from their works. He is not such a technically skilful publicist as, for example, Ehrenburg, but he sometimes rises to a high pitch of eloquence, as, for instance, in 1941, when the Germans were at the gates of Moscow and he issued a particularly moving appeal for wholehearted resistance to "the enemies of Russia, the enemies of culture."

Ilya Ehrenburg's brilliant documentary novel of the French capitulation and betrayal, *The Fall of Paris*, is too well known in Britain, where it has already sold over 60,000 copies, to need any further recommendation. Its circulation inside the Soviet Union has gone into millions already.

HISTORICAL NOVELS & BIOGRAPHIES

The war has not been allowed completely to monopolise the Soviet Russian literary scene. It so happens that a recent tendency in Soviet fiction—and one whose results have appeared in published form during the war years, though in some cases the books themselves were written earlier—is the historical novel. Here are some recent examples, all of which have been published during the past two years or so.

Genghis Khan and *Batu Khan*, by Yanchevetsky. These are the first two parts of a long historical trilogy.

Genghis Khan itself is a detailed reconstruction of the Mongol invasion. It is very carefully written and succeeds in conveying a strongly oriental atmosphere. Its

author is a distinguished scholar and a specialist in his period, who has put a great deal of painstaking research into the writing of it.

The Great Mouravi, by A. Antonovskaya. This, according to the Soviet press, is a brilliantly successful historical recreation of Georgian life and customs at the end of the XVIth century. Its principal character is Georgi Saakadze, a famous figure in Georgian history.

The Ordeal of Sevastopol, by Sergeyev Stansky, is a novel of the Crimean War. It is enormously long, longer than Tolstoy's *War and Peace*, and represents a very considerable feat of sustained imagination. There is a huge cast of characters and a most painstakingly detailed account of the military and political aspects of the Crimean War.

Together with these and other historical novels, there have also been a number of biographies of outstanding figures in Russian history. Two of these, both of which received mentions in recent lists of Stalin prize awards, were *Suvorov*, by K. Osipov, and *Dmitri Donskoi*, by S. Borodin.

The first is a lively presentation of the fascinating character of the famous XVIIIth century Russian military leader whose name is a living tradition in the Red Army today; together with a clear account of his campaigns.

The second is a vivid reconstruction of the life and times of Dmitri Donskoi, the Prince of Moscow who united Russia in the XIIIth century and threw off the Tatar yoke.

Kutuzov, by Mikhail Bragin, is another popular biography of a famous figure in Russian history—General Mikhail Kutuzov, conqueror of Napoleon in 1812. The book is based on historical documents and memoirs of Kutuzov's contemporaries.

RECENT LIBRARY FAVOURITES

The popularity of the following two books, which were both outstanding successes in the publishing season of the first war year, give some indication of the catholicity of taste of the Soviet reading public.

One of these books was the first instalment of the memoirs of General Ignatiev, a particularly interesting figure in that he was born and brought up in the innermost circles of the Tsarist court, was one of the Tsar's pages and carried the Tsarina's train at her coronation.

At the time of the Revolution, Ignatiev was acting as military attache to the Russian Embassy in France. By this time he had become deeply convinced of the hopeless and inherent rottenness of the Tsarist regime and threw in his lot with the young Soviet state, of which he has been the faithful servant ever since.

The other book is *Chukotka*, by Semiyushkin, which is a delightful account of cultural and educational work among the Chukchee Eskimos inhabiting the remote shores of the Behring Straits. It tells how a party of Soviet teachers succeeded in winning the confidence of the Chukchee children, includes a number of lively anecdotes and provides a great deal of interesting information about the Soviet Government's policy with regard to the backward people among the national minorities of the U.S.S.R.

THE SOVIET READING PUBLIC AND THE CLASSICS

The preoccupation of Soviet writers with war themes is of course only natural and inevitable. It would be a great mistake, however, to suppose that the Soviet reading public has lost any of its voracious enthusiasm for the classics of world literature. And Soviet men of letters have been doing their best to satisfy it.

Here are a few random examples from the field of English literature alone, all from last year. Evgeny Kashkin was decorated by the Soviet Government for his translation into Russian of Chaucer's *Canterbury Tales*, and the production of the book was entrusted to the well-known artist, Borodat.

Boris Pasternak finished his verse translation of *Romeo and Juliet* which was highly praised by Soviet critics, including Professor Morozov, and many other Soviet Shakespearian scholars. A large number of sections of British poets, including Shelley and Burns, are sold. The State Publishing House brought out a new edition de luxe of *Pickwick Papers*.

Dickens has always been a particular favourite of the Russian public. The civil war was hardly over, in 1919, when the Soviet Government issued large editions of *A Tale of Two Cities* and *Oliver Twist*, and every year since then new editions of some work or works of Dickens have been issued.

When, in 1942, subscriptions were invited for the latest edition of Dickens' collected works, the publisher received applications for 20,000 sets in two days.

Soviet Russian interest in Shakespeare can only be described as passionate and intense. Shakespeare's works enjoy an enormous popularity in the Soviet Union, his plays are translated into 24 languages and performed regularly and constantly. Every year the traditional Shakespeare conference is held in Moscow at which a series of papers are read by Soviet Shakespearian scholars.

Readers' interest in the Russian classics themselves, has, if anything, increased since the war.

A few figures will serve to illustrate the gigantic cultural progress achieved during 25 years of Soviet power.

In 1918, in Russia, 26,200 titles were published in an aggregate edition of 86,700,000 volumes, or an average of

3,300 volumes per title. In 1939, in Russia, 43,800 titles were published in an aggregate edition of 701,200,000 volumes, or an average of 16,000 volumes per title. Books in the U.S.S.R. are published in 111 languages.

In pre-Revolutionary Russia, world classics like the works of Shakespeare, Goethe, Cervantes, Balzac, Pushkin, Saltykov-Schedrin, Tolstoy, Chekhov and Gorky were only available to the educated few. From 1917 to 1938 publication of the works of Byron increased some *threefold* as compared with the period 1897-1916, of Balzac *fifteenfold* (in nine languages), of Cervantes about *fivefold* (in ten languages), of Pushkin *threefold* (in 69 languages), of Saltykov-Schedrin over 85 *times* (in 24 languages) and of Gorky over 86 *times* (in 64 languages).

Taking into account the tremendous development of the library chain in the U.S.S.R., the actual circulation of books has increased at least 80 times as compared with Tsarist Russia. In the U.S.S.R. perfect strangers will come up to you in cafes or tramcars and ask what you are reading as though afraid they may have missed something.

CULTURAL PROGRESS IN NATIONAL REPUBLICS

The cultural development of the backward nationalities formerly oppressed by Tsardom has been especially rapid. Before the Revolution 40 of them did not even have an alphabet. Since 1917 alphabets have been provided and world classics have been translated into their languages. This work has not been interrupted by the war and recently classics of world literature have now been published in the Eskimo language for the first time.

This progress is perhaps most marked in the Moslem republics and has been more than maintained during the war period. In the central Asiatic Republics—Uzbekistan,

Turkmenistan, Tadjikistan, Khirghizia and Kazakstan—on January 1, 1941, there were 140 theatres of which 108 were performing in the languages of the native populations. In these republics there were 7,407 libraries, 8,442 clubs, and 53 museums.

The languages of the Moslem peoples and their ancient literature is being revived. Russian and European classics are being translated into the languages of the Turke-Tatar peoples. Shakespeare's plays have been translated for the first time into the Uzbek and Tadjik languages and performed with success in Tashkent, Stalingrad and Samarkand.

Azerbaidjan, Uzbekistan, and Tadjikistan have their own people's artists; and poets, writers and dramatists of the peoples of the Caucasus, Central Asian and Volga regions have acquired an honoured place in Soviet Art.

During the war the writers of Kazakstan have produced several important works. The doyen of these writers is the veteran poet, 96-year-old Akjan Dambul, who was awarded a Stalin Prize for 1940. Today he sends his new songs of battle to the Kazak Red Army men and officers at the front.

The Khirghiz poet Al Yamkula's military verses have been translated into Russian. Another Khirghizian author, Tokobayer, has written a play about the Khirghizian Red Army men.

WAR PLAYS

Any consideration of the contribution of Soviet writers to the war effort would be incomplete without some mention of the modern Soviet war plays. The way in which these are being performed, often in more than one theatre at the same time in the same city, is a striking symptom of the wholehearted enthusiasm of the Soviet war effort.

This is not the place to deal with the Soviet Theatre in detail, but the following four plays are worth mentioning in any case, as they are definitely outstanding. They were awarded, respectively, the two first and two second Stalin prizes for plays in 1942.

The Front, by Alexander Korneichuk. This is a study of the downfall and ultimate dismissal of a Red Army General, a veteran of the civil war, who refuses to move with the times and keep abreast of modern military-scientific developments. He is ultimately replaced by a younger man.

This play has had an enormous success in the U.S.S.R. and was performed simultaneously in three different theatres in Moscow. The Soviet Government regarded it as exceptionally important and the press devoted a great deal of space to it. From the political and military point of view this play is of great interest. Its staging at a critical period of the war represented a remarkably bold piece of self-criticism and one which only an exceptionally confident, realistic and broad-minded Government would have decided to sanction.

Days of Invasion, by Leonid Leonov. The scene is a small Russian town just after the Germans have occupied it and the action concerns Soviet resistance to the invaders. One or two evil intentioned relics of the Tsarist regime creep out like bugs from the plaster. The Nazi terror becomes more and more acute. In the last act the town is retaken by the Red Army. The characterisation is distinctly subtle and the play has at times an oddly poetic flavour.

The Russians, by Konstantin Simonov. This is a vigorous, sincere play about an encircled Red Army unit holding out in one part of a town the other half of which is occupied by the Germans whose occupation is being made none too comfortable by Soviet guerillas. Exciting action

and accurate character studies of some variegated types of Red Army men and civilians. A love story under the strained circumstances.

Guerillas of the Ukrainian Steppes, by Alexander Korneichuk. This is a singularly attractive short play, with a successfully blended mixture of folk poetry and realism, depicting the vital reactions of some Ukrainian peasant collective farmers to the news that the Germans are approaching and the instructions to burn their crops.

A note or two about a few more plays may be of interest. Yuri Herman, the novelist, author of *Antonina* and *The Gangster*, has written a play called *To Those at Sea*, which portrays the crews of the convoy ships on the northern route.

Valentin Kataev, novelist and playwright, author of *The Embezzler*, *Forward*, *Oh Time*, *Lone White Sail*, and the play *Squaring the Circle*, has a new comedy, *The Blue Scarf*, dealing with the imbroglio that develops when a handful of Red Army men try to trace the girls who send them parcels.

TWENTY-SIX YEARS OF SOVIET LITERATURE—SOME NOTES FOR ENGLISH READERS

BACKGROUND AND LINKS WITH THE PAST: In the first quarter of a century of its existence the Soviet Union gave rise to a profuse, vigorous and interesting literature which is the product and at the same time the reflection of a unique period of continuous and very rapid transformation and development. It was natural and inevitable that such a literature should be steeped in social consciousness and the sense of social responsibility. In this respect, however, it does not represent a breach with the past, but rather an extension of the great Russian literary tradition.

As a contemporary Soviet critic writes: "The creative endeavour of the writers of the 19th century, the Golden Age of Russian literature, developed under the motto of the struggle against autocracy and serfdom, of ruthlessly exposing the reality which fettered both the material progress and the spiritual development of man . . . on the banner of Russian literature there has always been inscribed the great word 'humanism.' "

Pushkin, Gogol, Lermontov, Goncharov, Saltykov-Schedrin, Turgenev, Chekhov—all these great writers were "socially-conscious" and most of them were imbued with a prophetic sense of Russia's historic mission. Often this sense was only partly conscious and was misdirected and several of the greatest Russian writers misunderstood the nature of the developments they were reflecting, but this did not affect the artistic integrity of their vision. "Oh Russia, Russia," exclaimed Pushkin, beating his head against the wall, after he had finished reading Gogol's satirical picaresque masterpiece "Dead Souls," of whose real sociological implications Gogol himself was certainly not fully aware. Tolstoy and Dostoevsky preached variations of a gospel of submission by which Russia was to redeem humanity, but this did not prevent them from recreating, with masterly insight, a vast panorama of the social life of their time and revealing it as ripe for revolutionary change.

Outside Russia, the progressive force of the great 19th century writers has been underestimated and in some cases neglected. For instance, many of Chekhov's western admirers have tended to regard him as an ivory tower dweller, the dreamy sensitive, specialist in catching the various shades of gray; whereas, in fact, as Gorky pointed out, Chekhov was a passionate believer in human progress with a strong sense of the practical, material values of life.

The attitude of both Soviet literary critics and the public as a whole towards the great 19th century writers is one of the deepest admiration. Their works are printed and reprinted in large editions and translated in the languages of the various national republics. They are esteemed as great Russians, great artists and forerunners of the revolution.

PRE-REVOLUTIONARY LITERATURE, GORKY AND THE TRANSITION: Chekhov developed his inimitable and highly individual technique of impressionistic naturalism to a pitch of perfection. When he died, in 1904, the first cracks in the corrupt and crazy structure of the Tsarist autocracy were already beginning to appear.

During the period between the end of the 19th century and the 1917 revolution, the Russian literary scene presented a diverse and somewhat contradictory picture. The two main tendencies to be observed can be summed up roughly under the headings of "modernism" and realism. Under modernism can be classed a number of writers of varying degrees of talent—mystics, nihilists, symbolists, such as the novelists Sologub, Andreyev, Bely, and the great symbolist poet of genius Alexander Blok. The realists were represented by an independent school, and the group of writers which gathered round Maxim Gorky and his publishing house. "Znanie."

Gorky himself is regarded as the father of modern Soviet literature and the link between the literary past and present of Russia. His pre-revolutionary works, written as the result of first-hand acquaintance with almost every aspect of Russian life, constitute a positive encyclopaedia of Tsarist Russia and his post-revolutionary books faithfully portray the development of the individual in relation to society throughout the storm-and-stress period of revolution.

Gorky may be said to have introduced a new hero, the man of the people, and a new method of presenting him. He was the first writer to become fully conscious of the nature of the social task with which history had confronted the Russian people. His own work is distinguished by an extraordinary acuteness and accuracy of observation and a capacity for lighting up and "vitalising" the drabdest scene. Despite his passionate pre-occupation, in his earlier works, with social injustice, and later, with the conscious transformation of human society, he is one of the least didactic of writers. Gorky's influence on Soviet life and literature has been great. It was he who defined "socialist realism," which became the accepted literary current after 1932, as a means of integrating literature and life. "We are interested," he wrote, "in accurate description of reality in so far as this is necessary for a deeper and clearer understanding of all that we must abolish and all that we must build up."

The following tentative selection from those of Gorky's books which have been translated into English should give you some idea of his calibre as an artist and his power as a social and ethical influence: "Through Russia" (autobiographical stories); "Decadence," "Mother," and the novels making up "The Life of Klim Samghin," an enormous work tracing the development of a character throughout the entire revolutionary period; "Days With Lenin," "Fragments From My Diary," "On Guard for the Soviet Union," and "Culture and the People"—two volumes of articles and essays written by Gorky not long before his death and expressing his views on a number of social political and literary questions.

Another powerful influence in almost every field of Soviet literature (including writings for children) who, like Gorky, served as a link between the old and the new, was the poet Vladimir Mayakovsky, who developed from

an avant-garde futurist into the poet of the revolution. Stalin has said of him: Mayakovsky was and remains the best, most talented poet of our Soviet epoch." Mayakovsky, was unique as a poet who not only accepted the revolution, but, so to speak, jumped forward to greet it and found in it his inspiration. You can get a very good idea both of the nature of his poetry and his enormous services to the revolution in the selection of his work translated by Herbert Marshall.

Other poets of international reputation who accepted the revolution, but with reservations, were Alexander Blok, the great symbolist poet, who wrote "The Twelve," and the peasant poet, Esenin, a wayward genius who was nostalgically obsessed with the life of the old Russian village. The poets who stoutly defended the revolution and served it faithfully while continuing to write in their own light individualist vein were another symbolist Valery Bryusov, and Boris Pasternak who remains one of the most talented living Soviet poets.

REVOLUTION AND CIVIL WAR: During the period from 1918-1922 history was being made so rapidly and under such intense strain that there was hardly time or opportunity to write about it. The events of these years were the material for a large number of novels, written at various times during the next two decades, which form one of the most important and vital section of Soviet literature.

Some outstanding examples of these chronicles of the Civil War are Furmanov's "Chapayev," a vivid documentary of the peasant guerilla leader, one of the heroes of the Civil War whose memory has become a legend throughout the Soviet Union, who commanded a division against Kolchak in the Urals; Fadeyev's "The Nineteen," which describes the indomitable resistance of nineteen

Soviet guerillas in Siberia and his other Civil War novel "The Rout"; Yury Lebedinsky's "One Week," the story of a peasant rising led by Whites. Babel's "Red Cavalry" gives a series of stark impressionistic sketches of service under Budyenny. Serafimovich's "Iron Flood," an epic of the great march of the Taman army, and Vserdov Ivanov's "Armoured Train 19-69" are also among the most impressive of these Civil War chronicles which have been translated into English.

Sholokhov's novels of the Don Cossacks, "Quiet Flows the Don" and "The Don Flows Home to the Sea," which have been best sellers in English translation, provide a whole panorama of Cossack life during the revolution, both at the front and in the villages, and are generally regarded as among the outstanding achievements of Soviet fiction. (His "Virgin Soil Upturned" deals with the period of collectivisation.) There are a number of other novels, some of them less familiar to outside readers, which trace the fate of individuals of various groups throughout the revolutionary period. Alexei Tolstoy's "Road to Calvary," the third part of which has only just been completed, gives a searching account of the reaction of two sisters, representatives of the Petrograd intelligentsia to the revolution, and covers a vast field of incident, is one of the most remarkable studies of this period and a major work of Soviet literature. Konstantin Fedin's "Cities and Years" and "The Brothers" also deal convincingly with representatives of the pre-revolutionary intelligentsia in the revolutionary and Civil War years.

Two other important novels dealing with this period are Voronsky's "Waters of Life and Death," which provides a fascinating account of Bolshevik Party activities from 1905 onwards, and Ostrovsky's autobiographical "The Making of a Hero," which traces the life history of a young communist who fought with the Red Cavalry

throughout the Civil War, took an active part in the rehabilitation of the countryside, and later became paralysed and blind. Ostrovsky's courage and determination to fight on despite his infirmities make this a memorable book and one which is held up as a living expression of the communist spirit.

SOCIAL SATIRE: The N.E.P. period which followed the Civil War gave rise to several comic satirical novels which were freely critical of certain aspect of Soviet life, and written in the traditional picaresque vein of Gogol's, "Dead Souls." The three examples of these which have been translated into English are far too little known, but are well worth reading. They are "The Embezzlers," by Valentin Kataev, and "Diamonds to Sit On" and "The Little Golden Calf." The humour of all three of them is peculiarly Russian, with a deft mixture of clowning and satire and some exceedingly subtle characterisation.

"The Embezzlers" is a beautifully written story of a cashier and a clerk who go on a fantastic spree in the underworld of Leningrad. "Diamonds to Sit On," an exceedingly funny, vigorous, knock-about farce, is the first instalment of a talented rogue, Ostap Bender, in search of a hidden treasure. Its sequel, "The Little Golden Calf," is a longer, more mature work in which Bender pursues a N.E.P. millionaire throughout the length and breadth of the U.S.S.R., only to find when he has blackmailed him out of a million that there are no longer any facilities for millionaires. Bender's adventures provide the opportunity for a running fire of satire at the expense of bureaucracy.

The other notable Soviet satirist, whose work is well known in this country, is Mikhail Zoshchenko, who has developed his own inimitable satirical vignettes, written in elaborately simple style and often aimed at the expense

of what Gorky defined as "Soviet philistinism." Until recently these short stories were the only examples of Zoshchenko's work which had been translated into English, and in certain quarters the illusion had sprung up that he was frowned upon by the Soviet authorities. In fact, however, Zoshchenko is not only enthusiastically appreciated by his own countrymen, but he is also the author of stories of the Civil War and also of "The Story of One Life," describing the construction of the White Sea Canal by prisoners whose work was afterwards rewarded by the state.

NOVELS OF SOCIALIST RECONSTRUCTION AND COLLECTIVISATION: The inauguration of the first Five-Year Plan in 1928 marked a new phase in Soviet life which was to have a considerable influence on literature.

One of the most widely discussed novels of socialist reconstruction, which was a forerunner of a host of books written after 1928, was Gladkov's "Cement," published in 1925, which traced the story of a former Red Army man and his wife. Dasha, who is in fact the central figure, against a crowded background of factory life, and whose solution of her personal problems is an example of the socialist attitude towards life. Of the novels of the Five-Year Plan period, the following are among the foremost translated examples: "Forward, Oh Time!" by Valentin Kataev, which is a lively account of a concrete-mixing race between the shock brigades laying the foundations of a gigantic plant; Pilynak's "The Volga Flows Into the Caspian Sea," the principal characters of which are three engineers engaged on work in connection with the Moscow-Volga canal.

An important writer, who has written about a number of aspects of Soviet life, is Leonid Leonov. His first post-revolutionary novel was "The End of a small Man,"

which described the sufferings of an elderly scientist during the Civil War period. "The Badgers" was a study of peasant life in the years after the Civil War. "The Thief," set in the N.E.P. period, traced the downfall and ultimate regeneration of a gangster. Leonov's two novels of the construction period are "Sot," dealing with the transformation in the face of enormous difficulties, including sabotage, of a wild tract of land in the Lake Ladoga area into a centre of the paper industry, and "Skutarevsky," the chief figure of which is a scientist who is directing an electrification project and becomes won over to whole-hearted enthusiasm for the Soviet system. Of the novels dealing with agriculture collectivisation, in addition to Sholokhov's "Virgin Soil Upturned," perhaps the most outstanding, at any rate as a documentary, is Panferov's gigantic book, "Brusski," which provides a detailed history of the life of a village.

The above are only a few of an enormous number of Soviet novels which deal with every aspect of life since the revolution and provide an extraordinarily detailed documentation of the entire period. Many of them deal with problems of adaptation, either by the individual or special groups. Two examples of these which should be mentioned are Makarenko's "Road to Life," an account of the re-education of homeless adolescents, and Yury Herman's "Antonina," the life story of a Soviet woman who passes through a period of considerable difficulty before she settles down in the new society.

Of Soviet novelists who have chosen subjects outside the U.S.S.R., there is of course the prolific Ehrenburg, best known in Britain as the author of "The Fall of Paris." Ehrenburg has written nearly a dozen books, several of which, notably "The Adventures of Julio Nuenito" and "The Loves of Jeanne Ney," deal either realistically or satirically with life in Europe in between the world wars.

Another novelist, without some mention of whom even the barest catalogue of Soviet literature would be incomplete, is Anatoli Vinogradov, author of "The Black Consul," a historical study, based on first-hand documentation, of Toussaint L'Ouverture's revolt in Haiti at the beginning of the 19th century. This has been translated into English. Vinogradov has also written novels about the lives of Stendhal and Paganini, and recently published "The Chronicle of the Malevinskys"—about a family of engineers who played an important part in the gasification of coal.

Historical novels of Russian life are becoming increasingly popular at the present time. The outstanding example of these is Alexei Tolstoy's sweeping, vigorous "Peter I"; another is Chapygin's "Stepan Razin," an exciting reconstruction of the famous 17th century popular hero.

THE STALIN PRIZES

The Stalin Prizes, which were first instituted in 1941, on the occasion of Stalin's 60th birthday, consists of 200,000, 150,000 or 100,000 roubles, equivalent to about £10,000 7,500 5,000 in English money. They are awarded annually to some hundreds of Soviet scientists, engineers, technicians, military inventors, artists and writers for the best cultural or defences achievements of the year.

The First Class prizes in the artistic, including literature, sections amount to 100,000 roubles, and the second prizes to 50,000 roubles.

On the occasion of the institution of the prizes in 1941, literary prizes were awarded as follows:

FICTION

1st Prizes :

Alexei Tolstoy for *Peter I.*

Mikhail Sholokhov for *And. Quiet Flows the Don* (Volume 4 of which was published in 1940).

S. Sergeyev Stensky for *The Ordeal of Sevastopol.*

2nd Prizes :

A. Novikov-Priboy for *Tsusima.*

N. Virta for *Loneliness.*

L. Kiacheli for *Gvadi Bigva.*

POETRY

1st Prizes :

Nikolai Aseyev; Yanka Kupala (Byelo Russian); Pavel Tychina.

2nd Prizes :

- Tamboul (Kazakh); V. Lebedev Kumach (Lyric writer).
S. Mikhailov (Children's poetry).
G. Leonidze (Georgian).
A. Tvandovsky.

PLAYS

1st Prizes :

- A. Korneichuk for *Platon Krechst*.
K. Trenev for *Lyubov Yarovaya*.
N. Pogodin for *The Man With the Gun*.

2nd Prizes :

- S. Vahgun for *Vagif*.
K. Krupiva for *He Who Laughs Last*.
V. Solovyov for *Field Marshal Kutuzov*.

Professor Vladimir Potemkin (Doctor of Historical Sciences), Evgeni Tarle (Member of the Academy of Sciences), and Professor Vladimir Khvostov, were also awarded prizes in the History section for their work entitled *The History of Diplomacy*.

1942

Fiction :

- Ilya Ehrenburg for his novel *The Fall of Paris*.
Yanchevetsky for his novel *Genghiz Khan*.

Poetry :

- Tikhonov for his poem *Kirov Is With Us*.

Plays :

- Simonov for his play *The Man from Our Town*.
Korneichuk for his play *Guerillas of the Ukrainian Steppes*.

1948

FICTION

1st Class Awards :

Alexei Tolstoy for his novel *Road to Calvary*.

Wanda Wassilewska for her novel *Rainbow*.

2nd Class Awards :

P. P. Bashov for *Malachite Shkatuska*.

Leonid Sobolev for *The Soul of Sea*.

POETRY

1st Class Awards :

F. Rylsky and M. V. Isakovsky.

2nd Class Awards :

M. I. Aliger.

PLAYS

1st Class :

Alexander Korneichuk for *The Front*.

L. Leonov for *Days of Invasion*.

2nd Class :

Konstantin Simonov for *The Russians*.

ACTORS & AUDIENCES IN THE SOVIET UNION

GOING to the theatre in the U.S.S.R. is a unique experience even for the most hard-bitten playgoer.

Normally in Moscow—and throughout this short sketch peace-time conditions are implied unless specifically stated to the contrary—the show begins at half-past seven. This does not mean, however, that the playgoer is home by ten. On the contrary, half-past eleven or even later is a more likely time, for when the Soviet citizen goes to the theatre he has a real evening out. Plays are usually four acts and the intervals fairly lengthy, so that one can easily spend three and a half or even four hours in the theatre.

The exterior of the theatre may not be duly impressive—though there are some exciting new buildings to be seen, not only in Moscow, but even in places as far apart as Rostov and Archangel. The approach and facade of the big Moscow opera house, the Bolshoi, can never be forgotten. But once inside the theatre one immediately notices a new atmosphere. The foyer and the decoration throughout, is sober and restrained. There is rarely any encrusted gilt or elaborate rococo.

People are swarming in, but quietly and in an orderly way. By the time the cloakroom attendant takes one's coat—for it is quite impossible to enter the theatre wearing it—one is able more to define one's reactions.

It is a social occasion that is being attended. There is the same air of politeness, respect and keen expectancy. The audience, as they stream in, might all be going to a big reception. Yet this is a normal evening, with the theatre giving its normal performance.

In the auditorium it is even more interesting. First, there is hardly a vacant seat to be seen, although this theatre has given this play many hundreds of times, for it

is an old favourite and has been long in the repertoire. Then there is not much to distinguish between the different parts of the audience in the way they are dressed. And, common to them all, is the air of excited anticipation. As the time for the curtain to rise draws nearer the atmosphere grows steadily tenser. Everyone seems to be mentally and emotionally on his toes and one is irresistibly drawn into the prevailing mood.

Finally, all attention is drawn to the big front curtain. If it is the Moscow Art, there is a big white sea-gull which will shortly divide, but in any case the lights will soon go down, the curtain up and the show (one almost said the party) begins.

For the next few hours the stage holds all attention. Three things are bound to be noticed there. First that the play seems to mean a great deal to the audience. Whether it is a contemporary, topical play dramatising the conflicts that these people in the audience have undergone, or a classic—and nowhere are so many foreign and Russian classics performed as in the U.S.S.R.—there seems to be a very close connection between actors and audience. They are undergoing a common emotional and intellectual experience.

Naturally, the actors have the most opportunity for showing this, but the audience too, by their rapt attention and fervent applause, show that they do genuinely "assist" at the spectacle.

Secondly, the standard of acting is phenomenally high. Even the smallest parts are played with a finish that indicates months of rehearsal.

Also the cast play together, combining superbly. They have a cohesion that also shows long association. Lastly, the setting, dressing and general mounting of the show shows no expense spared in any direction, although the result is never garish and tasteless. It is merely that what

is required is there, whether it is something simple or, if it is a famous opera, dazzling splendour.

No wonder, therefore, that the audience is enthusiastic and applauds without restraint.

The intervals are interesting also. First because there is so much to see and, secondly, sufficient time to see it in. The foyers are vast. There is invariably a large buffet where all kinds of light refreshment can be bought, and there are tables to sit at if desired. Then there are exhibitions, perhaps of pictures, or on some subject relating to the play. The theatre's past history is recalled by old posters and photographs. Often there are illuminated models of the settings for past productions.

Finally, there is the audience to see once more, as they walk up and down in twos and threes, laughing and joking, or more probably earnestly discussing the play. But the Russians are not a solemn people and if they take their amusements very seriously they also show unmistakably that they are enjoying themselves.

So it happens, and afterwards, if this is one's first visit, there is time to reflect. The first feeling is usually of sheer gratitude and delight for such a long and fascinating evening. But a host of questions follow. How is it all done? Where do the actors come from and what are the conditions under which they work? How are they trained? Even more important, where do the audience come from and how did they get tickets?

Finally, is it like this all over the U.S.S.R., or is this just a very lucky and favourable example? It is to try and answer some of these questions and several others that the following pages have been written.

The Audience

In the preceding short impression, a great stress was laid on the audience, they are, perhaps, the most dis-

distinctive feature of the Soviet Theatre. Their intense interest, their violent, but by no means indiscriminating nor hysterical, applause and, above all, their immense numbers strike any visitor. A dozen or so empty seats indicate that the theatre, or more probably, that particular production, is meeting with marked public disfavour. Usually there are no empty seats and it is necessary to book many weeks ahead if tickets are bought in the ordinary way.

It is not, however, a question of a small and faithful public. This can be disproved, first by the number of theatres and secondly by the length of time productions can be kept in the repertory.

Gorki's famous *Lower Depths*, for instance, received its thousandth performance at the Moscow Art in 1941, having been in the repertory for nearly thirty years.

It was also still possible in 1941 to see Vakhtangov's own production of *Princess Turandot* at the theatre which he founded and which bears his name, although he had been dead for nineteen years.

Doubtless many people saw these productions over and over again, but like the new productions they still draw full houses and it is reasonable to suppose that a very large percentage of the population goes regularly to the theatre, especially as in Moscow alone there are over forty theatres.

What is certain is that they do not come merely for want of anything to do, but because of their intense cultural enthusiasm and genuine love of the theatre. Their appreciation seems to cross the footlights (where these exist) and become part of the performance. How is it they feel this way?

The answer is that the content of a play is nearly always of a nature to make the mass of the people feel that it concerns them. During the Civil War, when the new type of theatre was young and struggling hard; during the Five Year Plan when the country wrestled with problems, the

dimensions of which are only now being realised abroad; and now, when the Soviet state is engaged in a life and death struggle with Fascism, the theatre has always considered its prime duty to be that of dramatising the ordinary worker's problems so as to fit him to deal with them more easily.

This does not in the least mean that the plays are always topical, or drab and grim. There is always plenty of laughter, for the Russian has an excellent sense of the comic. There is plenty of colour both in costume and setting—indeed Soviet stage-designs are hard to rival for their sense of dramatic design coupled with a pleasing appearance. Also, as has been said earlier, the classics are extensively performed, and not usually in modern dress. But the theatre, in the deepest sense of the word, belongs to the people, artistically as well as in an economic sense.

This feeling is further strengthened by the fact that every theatre has the closest links with some factory or government department. It is a frequent occurrence for a factory to buy up the entire seating capacity of a house for a single performance. These are known as "closed" performances, and workers from that particular factory are enabled to buy tickets at reduced prices.

In the big theatres factories often rent the seats or boxes for the season and award the tickets to workers who have merited special distinction. Workers' organisations, too, frequently take what we should call "bloc" bookings. Thus by various means not only does the average worker get a seat at a cheaper than normal rate but also, what is far more important, there exists an economic and factual link between the theatres and their worker-audiences.

It need hardly be said that theatres frequently cannot depend solely on their box-office returns both because of the low price of the tickets and because of the scale on which the shows are run. Big State subsidies are paid to

some of the main theatres whose work is considered worthy of it, for the theatre in Russia is considered to be a necessary public service.

In these ways the theatre is able to keep in close touch with its audience and to make the audience feel, in turn, that the theatre is theirs. This relationship is even further strengthened by the practice of holding organised discussions with responsible members of the audience, such as elected delegates from a factory that extends patronage to the theatre.

This practice is widely followed throughout the Union so that theatres not only base their judgments on attendances and receptions, but can get, what is far more needed, really representative criticism. In this way the wishes of the people can be known and the theatres never feel cut off from their public. This is one of many reasons for that sense of unity between actors and audience that has been remarked on. Each is conscious of the other's desires and hopes, and both are united in a collective endeavour to assist through their own art in the building of Socialism.

Actors

The high standard of acting is always commented on by foreigners when they first visit the theatres of the U.S.S.R. Not only are there famous leading actors and actresses, as there are in every capital, but the general standard is so high. Even the smallest part is as perfectly acted as a leading one.

The writer recalls seeing in the Moscow Art Theatre's production of Tolstoy's *Resurrection* (a dramatic version of the novel) a whole jury sworn in. Each of these men had just to cross the stage in one scene and take the oath, otherwise they were just part, though a very active part, of a stage "crowd." But in this simple action of crossing and swearing they each created a separate character that

was completely recognisable. It was a perfect example of the care accorded to small parts.

Something, of course, must lie behind this excellence, and the reasons may be grouped under two headings: Training and Conditions of Work.

Training: In 1938 there were 44 theatrical schools in the Soviet Union and two theatrical institutes, one at Moscow and one at Kiev. The students totalled 4,000. The two institutes are directly under the People's Commissariat for Education and cover a wider field than the schools, which are usually directly attached to individual theatres. The curriculum and methods of the schools vary considerably with the style of the theatre to which they are attached; for theatres in Russia have a marked individuality and one cannot lightly change from, say, the Moscow Art to the Kamerny (another famous Moscow theatre) without a considerable readjustment of style.

All the schools are supervised, but not necessarily run directly by the People's Commissariat for Education. Whatever variation in methods they follow, a certain minimum standard is laid down.

The courses must include Political Economy, History of the Western Theatre, History of the Russian Theatre, the Russian Language, Russian Literature, Western Literature, Psychology, History of Art, History of the Methodology of the particular theatre to which the school is attached; Voice-Production, Choral Singing, Solo Singing; Make-up, Stagecraft, Gymnastic-cum-Acrobatic dancing; finally, and most important, Mastery of Acting. It is a formidable list and requires time to complete. But it is a thorough one, though one or two items may call for some comment.

The Russian Language, for instance, is obligatory, and necessary when one recalls that a hundred and forty odd languages are spoken in the U.S.S.R. This does not mean

that performers of the national republics cannot act in their own language. On the contrary, although that had been the Tsarist practice, it has been a major part of the Soviet Government's policy to encourage the artistic development of the various nationalities by building on their own traditions and by using their own language. It is, however, necessary to know and be fluent in the one common *lingua franca* of this vast federation of peoples.

The introduction of Political Economy coupled with the attention paid to artistic history shows the desire that the actor should not conceive of his art as divorced from the main course of society. Only by knowing and being able to trace that course will he be able to see his dramatic work in a proper perspective.

Finally, mastery of acting is a phrase that covers the widest possible field. Russia is fortunate in this respect, having recently possessed a great theorist as well as practitioner of the theatre in the person of Constantin Stanislavski, co-founder of the Moscow Art Theatre.

Stanislavski left behind him a carefully worked-out system of teaching acting that has now become the only officially recognised procedure, and all schools and institutes must base their training on his principles, though there is plenty of latitude for departure and variation in their application.

This immense programme needs time to accomplish, and it is not surprising that four years is the usual length of training.

Often the first year is on a part-time basis, the student coming to school from his factory at about 5 p.m. and leaving round about 11 p.m. The second year is invariably full-time, and the student is paid a stipend. It is not great deal but it enables him to live; the theatre always has hostels for its students as well as a canteen in the theatre. Lack of money need deter no young and ardent actor.

Talent is another matter. The student will have to show himself worthy of acceptance in the first instance, then, during the four years the class will be weeded out, though only rarely after the first year has been safely surmounted. By the time the student enters his third year, he can feel pretty safe. He may begin to appear in the theatre's own productions in small speaking parts. The training is long and arduous, but it is the true explanation of the high standard which exists, for by the time the student has finished he is a fully-fledged actor, with real knowledge and experience behind him.

The Institute is a special type of school. Its main aim is to supply theatres to the more remote parts of the country. There is an entrance examination and the successful students take up residence, living collectively in a hostel, similar to the dramatic schools. They are usually between the ages of 17 and 25 and nearly a quarter come from collective farms. The students are drawn from innumerable nationalities (from the tribes in the far north to the Kalmucks of the South) that make up the population of the Soviet Union.

Each institute has about five hundred students and is divided into three sections, one for drama proper, one for music-drama, and one specially devoted to providing theatres for the national minorities.

Not only actors are trained, but also future producers, stage-managers and experts in all other branches of theatre-work; but the unique feature of these institutes is that whole groups, containing enough personnel to make up a complete theatrical company complete with its technicians, are trained as a body so that when they have finished their course they can go out and found a theatre.

Hundreds of miles often separate these students from their homes, and they go equally long distances to start their theatre, often to a place that has never known one

before. The course itself is similar to that in the schools, and the time spent about the same. Taken together, these institutes and schools form one of the most elaborate and complete systems of theatrical training that it is possible to find anywhere. They go far to explain the prevailing high standard.

Conditions of Work

To get a complete picture, however, the conditions of the trained professionals must be investigated. First, some figures.

In 1913, the Russian Theatrical Society, to which most actors belonged, had 8,000 actors on its books, of whom an average of 1,000 were always unemployed. By 1934 there were 1,500 stage-managers, 20,000 actors, 8,500 musicians, 400 scenic artists, and 16,500 miscellaneous workers employed in Soviet Theatres. The Bolshoi Opera House in Moscow has a pay-roll of 2,500. All these theatre-workers, irrespective of the nature of their jobs, belong to a common union, which ensures that the theatre as a whole is not divided up into separate groups with possibly antagonistic outlooks.

All this would mean very little if the Soviet actor and technician were not assured of absolute economic stability and permanence of employment. There is, first, the ceaseless expansion of the theatre, with new ones constantly being built, and secondly, the system of permanent companies. An actor is never engaged for a particular production but by the theatre as a whole.

There is, of course, a certain amount of interchange of personnel, but it is the exception rather than the rule, for the Russians believe that the theatre is such a delicate and complex organisation that frequent changes disturb its harmony and ruin its collective approach.

The Soviet actor, therefore, does not normally think in

terms of a single season, but of joining a theatre which offers the prospect of many years, perhaps a lifetime of service. It is only by this method that theatres develop their individual stamp and the actors learn to combine so that they form a highly organised team, possessed of a deep mutual understanding.

This satisfactory state of affairs is further assisted by the fact that there are no "runs" in the ordinary sense, but genuine repertory, such as we know in opera or ballet. This minimises the danger of actors becoming bored by constant repetition and thus getting stale. On the contrary, they have the very frequent experience of playing, on successive nights, a brand new production and one ten years old. This ensures a splendid continuity and helps more than anything else to create that sense of tradition that a theatre needs as much as a regiment or any other collective undertaking.

Most theatres also have a very large stock of actors to call on, unless they are in some remote provincial town, although even in such cases the company would be large by British standards. In Moscow or Leningrad, especially where the theatre has a school attached, the total number of actors is large indeed. The Moscow Art Theatre has a company of nearly four hundred.

This does not mean that the great individual actors and actress are not loved personally, as they are all over the world. In the U.S.S.R. there is very little chance of their personalities being swamped by the necessarily collective organisation. This is demonstrated by the individual honours bestowed on them by the Government, the highest of which is People's Artist of the Republic, and next to that, Honoured Artist of the Republic. These decorations are not awarded lightly and are very proudly displayed so that whenever the name of an artist bearing one is written or announced the Order follows it.

Finally, it must be stressed that theatre artists in the U.S.S.R. are never regarded as a race apart. The scene in *One Day of War*, when a famous singer mounts a tank and sings to a tank detachment just before they move into the battle is typical of the entire relationship.

One of the most famous Moscow actors, I. Moskvina, is a deputy to the Supreme Soviet, though, like the textile workers and miners who are his colleagues there, he does not thereby cease to follow his profession.

Actors, in fact, occupy a very high place in official and general approbation. Their salaries are relatively high, they are looked after when sick, and there are special rest-homes when they require a holiday. Above all, they are assured of security and of occupying a real place in the country's life.

They are, in fact, people's artists, as one of their titles declares practising their art for the people and being richly rewarded for doing so.

The Theatre

1. In Moscow and Leningrad.

It is inevitable that most of the country's finest theatres should be found in its capital. In the U.S.S.R. every separate republic has its capital and it is in these, naturally, that the best theatres are found. But it is in the new and old capitals of Russia—in Moscow and Leningrad—that the most famous theatres exist.

Pride of place must be given to the Moscow Art Theatre, or to give it its full name, the Moscow Academic Art Theatre. Its history goes back to 1898, when Nemirovitch-Danchenko, a successful playwright, joined hands with Alexiev Constantin Stanislavski, the director of an amateur group. Together they founded an art theatre.

There is nothing remarkable in that. It happens annually in most capitals. But this theatre, thanks mainly to its far-seeing and gifted directors, has a very different history from that of the usual "art" theatre.

Already by 1917 it had a long and famous record. Two great dramatists, Chekov and Gorki, had achieved fame through its work, but even more important, its approach to acting and its conception of how a theatre should be conducted had already exercised a decisive influence on the whole European Theatre. Its fame had spread far and wide, and it was becoming a model, having shown by its acting that there were undreamed-of possibilities for playwrights and actors to explore.

There was much speculation as to how this necessarily middle-class art theatre would survive the changes introduced by a Soviet regime. In the first flush of the Revolution there were many who derided it as old-fashioned and bourgeois but the young Soviet Government took a different view.

Lunacharsky, particularly, the Commissar on whose department the supervision of theatres fell, gave Stanislavski's theatre unstinted support, and for the first time made it financially independent. This was a big contrast to Tsarist days when, despite its fame, financial worries were frequent and even Stanislavski himself could never afford to drop outside commitments. With the revolution bankruptcy, to which his theatre had often come perilously close, became a nightmare of the past.

Since then, it has widened and extended its repertoire and outlook without ever breaking its long line of tradition or forsaking the ideals on which it was founded.

Its older members like Moskvina, Kachalov or Olga Knipper-Chekhova are the doyen of the Soviet stage, figures of immense veneration, and they have played their

full share in helping to train and develop the younger and post-revolutionary actors.

Stanislavski died in 1938, an internationally famous figure. His method of teaching acting, now the standard one in the whole country, is being more and more widely adopted abroad. Nemirovich-Danchenko, however, still continues as the theatre's principal director, besides having his own opera theatre.

A visit to the Art Theatre is not easily forgotten. It combines that air of veneration and weighty authority that envelops, say, the Comedie Francaise with the feeling that here is no dry and academic theatre but a living and developing one. It is doubtful indeed if there is any theatre in the world now where it is possible to see acting of a naturalistic kind carried out with such perfection. No detail, however trivial, is neglected. But there is no useless striving after more photographic reality. It is the inner experience that counts in the Moscow Art, that same "truth of feeling" of which its founder spoke so often. Rehearsals for a new and important production sometimes last an unbelievable length of time; there were over 300 rehearsals for the production of a new version of Tolstoy's *Anna Karenina* a few years ago. Many of the old productions are still kept in the repertoire, but there are two or three new productions each year, and it is a high honour indeed for a Soviet playwright to have a play accepted by this theatre.

2. The Vakhtangov Theatre.

This theatre bears the name of its founder, I. Vakhtangov, one of Stanislavski's most gifted pupils. He died tragically early in 1922, aged 38, but his theatre lives on. It has gone through many fluctuations since his death, but latterly it has emerged as one of the most stable organisations in the theatre world.

It accepts the psychological naturalism of the Moscow Art Theatre. It demands also that the theatre shall be, almost in the literary sense, a criticism of life. It demands that each actor should not only have penetrated the mind and feelings of his character but that he himself must resolve his attitude to that character. This must be shown in the playing. Therefore the acting there is sharper and more openly theatrical than the very restrained realism of the Art Theatre.

It is aware, if not too self-consciously, that there is an audience sitting there and uses more open methods of sharing its theatrical experience with it. On the other hand, it has always had a less defined style than the other famous theatres, due to its artistic organisation. Instead of one leading personality like Stanislavski or Tairov, it displays a more collective approach.

There is an Artistic Director, also a Literary Adviser, but it is the Artistic Council that really decides the policy of the theatre. Ten of this Council are old members of the theatre who were associated with the founder, but three are elected by the entire company. The Artistic Director presides over this Council, which decides questions like choice of a play, a producer and so on. When a new play is chosen, however, it is invariably read to the whole company and marked disapproval will cause its ultimate rejection.

It is, perhaps, due to this combined co-operative feeling that, after many growing pains, the theatre has forged ahead. Some of its producers, such as Zakhava, Rappoport or Simonov, are known outside the U.S.S.R. for their valuable contributions to theatrical theory, while inside they are known as amongst the Soviet Union's most gifted artists. In spite of its building having been destroyed by Fascist bombs in the summer of 1941, this theatre continues to be one of the main glories of the Soviet stage.

3. The Theatre of the Red Army.

In recent years a theatre that has come very much to the fore is the Theatre of the Red Army. It was founded in 1929 with a total company of 35; it was a late growth and had a small beginning. By 1939 its company had risen to 100 and the war has accelerated its progress. Originally intended solely for the entertainment and instruction of the Red Army, it used to undertake extensive tours in the spring, summer and autumn to the most remote military districts. Travelling is nothing new in the Soviet Theatre, but this theatre was easily the most widely travelled. Recently, although it has not slackened in this respect, it has built its own Moscow theatre and rapidly made it one of the most popular in the capital.

Under the direction of Popov, its productions have become famous. Naturally, in its repertoire it has tended towards "military" plays, but like all other Soviet theatres it has not neglected the classics. One of its most successful productions of recent years was Shakespeare's *Taming of the Shrew*, and it has produced other Shakespearean plays. This may seem surprising for a theatre intended primarily for soldiers, until it is remembered that the Red Army has always been regarded as a great cultural force as well as a powerful military weapon. Consequently, even when visiting remote garrisons classics have been performed. There is no room in the U.S.S.R. for any lower estimate of a Red Army man than of any other citizen; this is just one way of seeing that this is so.

4. State Jewish Theatre

Another theatre of more than passing interest is the State Jewish Theatre, which although it should perhaps be more correctly classed under theatres of national minorities, has achieved such a standing in

Moscow as to be worthy of mention. It was founded in January, 1919, one of the first visible signs that the Jewish people were no longer to suffer from racial hatred but, in common with all other races in the Union, were to live freely and develop their own culture.

At first it was restricted mainly to classical Jewish plays by Jewish authors, but later new plays began to appear. Jewish heroes of the past figured in many of these but some plays were contemporary in setting and often contained an element of sharp criticism. Its acting tended to the grotesque. Although it had its own enthusiastic public, it was distasteful to some people and it was not till 1935 that a really superb production put it on the cultural map. This was Radlov's production of *King Lear* with the lead played by the now famous actor, S. Mikhoels.

Gordon Craig was one of the many foreign visitors who reacted with great enthusiasm. He declared that Mikhoels' performance was, by a long way, the finest *Lear* he had ever seen. This was the theatre's turning point, and under the direction of Mikhoels it has broadened its scope considerably. It holds now a very proud position in the affections of its own people, always in any country assiduous theatre-goers. A recent census, however, showed that over a third of its audience was non-Jewish.

5. Kamerny Theatre

There are a great many more theatres both in Moscow and Leningrad that deserve mention; some rank as high, if not higher, than these four.

There is the Maly, the home of classic Russian acting until the Moscow Art usurped its place, but which still continues to maintain a prominent position. Then pages should and could be written of the Bolshoi, one of the world's most splendid opera houses, where International

opera and ballet is mounted on the most lavish scale. But the theatres described here have been chosen because each in its way represents a different type.

Therefore, some words must be devoted to the Kamerny Theatre, the nearest Soviet equivalent to what is in other countries termed an "art" theatre. It was founded in 1914 by Tairov, its sole director until fairly recent times. At first a small intimate theatre, its outlook in those days is well expressed by the fact that its outstanding production was Oscar Wilde's *Salome*.

Tairov, after the revolution, tried to concern himself more with content than with form, though he did not find it easy. One might have expected the new government to allow his rather precious, though undoubtedly gifted group, to drop by the wayside. Instead, they were given the usual unstinted support and became one of Moscow's leading theatres. Tairov performed one great service in that in his theatre one could see more foreign plays than anywhere else in Moscow. Eugene O'Neill received special attention and *The Hairy Ape*, *Desire under the Elms* and *All God's Chillun Got Wings*, were all produced at the Kamerny. Shaw, G. K. Chesterton and Dos Passos have also been introduced to Russian audiences by the Kamerny and in general this theatre has been a link with the Western world.

On the other hand, its outlook has never really corresponded to what the new audience demanded, and, finally, Tairov, though continuing to work there, was deprived of much of his autocratic control.

But he has certainly given many lovely and exciting productions to the Moscow public, though taking considerable liberties with scripts. There was, for instance, a production about Anthony and Cleopatra where the works of Pushkin, Shakespeare and Shaw were all blended into a single play.

The one great success that the theatre had was its first successful production of a Soviet play, Vishnevski's *Optimistic Tragedy*. It is perhaps characteristic that on the eve of the Nazi attack it was producing a version of *Madame Bovary*.

Experimental Theatres

So far nothing has been said here about the experimental theatres. At one time Moscow theatres were thought of abroad as places where actors swarmed up ropes and ladders and acted all round the audience. Most of these ideas were associated with the theatre of Meyerhold, an extraordinarily gifted producer who was given years of unremitting support until it was noticed that except for a handful of rather detached intellectuals the Moscow populace were not much interested in his very formalistic productions.

Less is known abroad of the work of Meyerhold's pupil Okhlopkov. In the early 'thirties he ran his own experimental theatre, the Realistic, and is now acting and producing with the Vakhtangov.

In the Realistic Theatre, actors and audiences were blended together so that one did not sit and watch a play, it went on all round. Okhlopkov used to choose plays of a topical character, as a rule, plays like *Mother*, *Aristocrats*, or the *Iron Flood* which dealt with the life of the ordinary Russian people.

In these productions the stage (or more properly, acting space) was centred in the midst of the audience, so that the spectator was irresistibly drawn into the play and felt himself to be taking part in it.

This was very different from Meyerhold, who, even at the height of his success, was always intent on portraying types rather than individuals. It was only Meyerhold's individual brilliance, his extraordinary sense of plastic rhythm, and his amazing ingenuity that kept him to the

fore so long. His earlier productions were fiercely social in content, extravagantly polemical, whereas towards the end, when he turned to French nineteenth century classics like *La Dame aux Camélias*, there was only the formal beauty left, the inner vitality had vanished.

Okhlopkov was always more human, intensely human, in his approach; and for that reason his will be a name that will live in the history of the Soviet Theatre. These experimental theatres were not only tolerated but were treated in the most generous fashion. Their mistakes may have been costly but were more than compensated for by their achievements; their mistakes, as well as their achievements, have done much to build the strong foundations on which the Soviet theatre stands.

There are very few types of theatre, and very few technical devices, that have not been tried out in the U.S.S.R.

The only theatre which has never been countenanced, is one run for purely commercial ends.

In this brief sketch of typical Moscow theatres, there are, as has been already said, considerable and serious gaps. There is the Gypsy Theatre, with its exceptional vitality, the Theatre of the Revolution, and the opera houses. Beside the Bolshoi, there is Nemirovich-Danchenko's opera house, where more experimental types of opera, treated in a more realistic fashion, are played.

It is the same in Leningrad, where, since the revolution, almost all modern European operas of note have been performed.

The writer recalls, when seeing a modern Soviet opera based on the famous novel *And Quiet Flows the Don*, some illuminated sets of past productions in the foyer. One of these showed a large spring suspended over the stage, with dark red and black wings.

On enquiry, this was found to be a setting for Alban Berg's *Wozzeck*, which, about that time, had created a

newspaper sensation by a concert performance in London; and this production had taken place years before! It was not the sort of thing that one expected to see performed in the Soviet Union, but so amazingly catholic and embracing is Soviet cultural taste that very few works of any merit do not get, not only a production, but a good and proper production.

For there is no drab uniformity in the Soviet Theatre. Every theatre has its own individual style to such an extent that each needs to be described separately. Certainly in the capitals there is the most amazing theatrical vitality and an enviable variety combined with unparalleled artistry.

Provincial and Republican

It would be a great mistake to suppose that theatres of merit and artistic interest are confined to Moscow and Leningrad. In 1913 there were only 153 theatres in the whole of the Russian Empire, but by 1941 the number had grown to 823. Nowhere has the growth been greater than in the non-Russian Soviet republics.

Republics such as the Armenian, Tajik, Turkmen or Kirghiz, which had no theatres at all before the revolution, had by 1938, 24, 21, 9 and 15 respectively. The Ukrainian Republic, which formerly had 35, possessed 100 in 1938; the same story can be told of each republic.

Do these theatres just perform Moscow successes or have they any independent contribution to make?

It can confidently be stated that the standard of their repertoire is just as high as that of the capital. This can be proved by a survey taken in 1938 of 53 provincial theatres.

There were found to be 92 productions of Ostrovski's plays, 50 of Gorki's, 34 of Shakespeare's (including 13 of *Othello*), 17 of Lope de Vega's and 15 of Schiller's. What

an amazing proof of the respect felt for the great classics, no matter of what country, especially when one recalls that each of these are separate productions and not touring companies.

The provincial theatres do not, however, only produce classics. They have a rich independent drama of their own.

A good example, chosen because of its remoteness, is the Buryat-Mongolian theatre. This was first founded in Ulan-Ude, the capital, in 1932. This republic, situated on the borders of China and Mongolia, has for its inhabitants people who have barely emerged from the nomadic stage. Any idea of such a thing as a theatre, except some very primitive erection, would have been inconceivable only a few years ago. Yet among their very first productions are plays of Goldoni and Moliere as well as Russian classics.

Othello was an early production as well as Lope de Vega's fine peasant play, *Fuente Ovejuna*. The Buryat-Mongolian theatre quickly developed a native form of music-drama into which they could interweave their own national folk tunes and stories.

Finally, a few years after their first production, they journeyed hundreds of miles to Moscow to perform at the Bolshoi Theatre. All the time it must be remembered they are performing in their own language, a language which in Tsarist days would have been discouraged even for ordinary use.

It would be a mistake, however, to imagine that these national minorities express their individual cultures only by performing in their own language. It goes much deeper than that. Their own national past, formerly inaccessible and proscribed, becomes alive again on the stage.

There are countless plays in Georgia and Armenia about Georgian and Armenian heroes of the past—and these two

republics are instanced only because they have such a long and rich history. Enormous attention has been paid to national folklore and legend so that every Soviet citizen can become aware of his own immediate national past as well as the immediate problems confronting the Union as a whole.

Even when plays dealing with these problems are taken from Moscow, they are very often altered to suit local conditions. Vsevolod Ivanov's *Armoured Train*, a famous production of the Moscow Art Theatre, was altered when produced in Georgia. Its action took place in Dagestan rather than in Siberia and Causcasian mountaineers took the place of Siberian peasants. There were even national songs and dances in the production which must have been very different from its Moscow original.

This was a Rustavelli Theatre production, a theatre outstanding among the republican theatres for its distinctive style and exacting innovations. This theatre amongst whose famous productions, plays of Georgian writers like Shalva Dadiani's *Tetnuld*, have disputed in popularity, with classics like Schiller's *Die Rauber*, renamed *In Tryannos*, has always built its style and strength on native traditions.

As its famous director, Sandra Akhmetelli, wrote when a young law student in 1915 about the Tsarist pseudo-Georgian theatre.

"The Georgian theatre is not Georgian, because its scenic means, its plastics, its accent, its intonation, its style do not follow organically from our nature. This theatre has not attempted to make a study of the body movements of Georgian people and to understand and reveal the rhythm of these movements."

It was by this intense interest in his own people and a subsequent development of their native gifts and inheritance that the Rustavelli director was able to bring his theatre such fame. It must, however, be reasserted that

this theatre is taken only as an outstanding example of the general development of the theatres of the national minorities. They have, throughout, continued to follow Stalin's slogan of developing their culture, "nationalist in form and socialist in content."

Children's Theatres

No survey, however short, of the Soviet theatre would be complete without some mention of the Children's Theatres. These are theatres for children, not by children. On the contrary, they have a large company of highly trained adults, consisting not only of actors, technicians and so forth, but experts to study the reactions of the audience and to mingle with the children in the intervals.

A visit to one of these theatres is one of the most moving experiences a visitor to the U.S.S.R. can have.

They are usually smallish, as the authorities feel that over-large theatres are unsuitable for children, but one will see six or seven hundred children seated without any adults at all.

The play, music and all that goes on in front of them has been chosen specially to suit the age-group to which they belong. Frequent questionnaires are circulated amongst the audience and regular discussions are held so that after years of experience there is a very exact knowledge of what children like at any particular age.

In the intervals there are the usual capacious foyers in which to wander round, sweets to buy, suitable picture exhibitions to look at and, more than that, trained personnel of the really good nursery school or kindergarten type who will collect knots of children round them to tell stories, or play tunes they have just heard on the stage and to which they can now dance.

The whole scene is one of such indescribable happiness that one wonders if there is any country where so much regard is had for the needs of children. The plays are delightful to watch and performed with just the same technical brilliance that one sees in the adult theatre.

The writer recalls an experienced English producer refusing, while the performance was still in progress, to believe that the parts of the boys were being played by women, so astonishing is their technique. The first of these theatres was opened on November 7th, 1918, and already by 1938 there were 131 similar ones in the country.

Some of the plays, like *The Negro and the Monkey*, have attained fame abroad, and many children's classics find their way to the stage, such as *Huckleberry Finn* and *Robin Hood*. These theatres are regarded not only as splendid entertainment, but as amongst the most vital educative forces in the life of a Soviet child, and as many children as possible are given the chance of going regularly to the theatre.

Finally, the existence of such theatres makes it possible to forbid children under a certain age to go to the adult theatres, since they have their own, thereby relieving the adult theatres of the necessity to toning down their whole performance so as to be on the level of a child.

Amateur Theatres

The true test of a country's love of the theatre is always to be found in the strength of its amateur theatre, which is highly developed in the Soviet Union. There is scarcely a factory, or recreational club, without its amateur dramatic group. In 1914 there were only 222 clubs in Russia, existing almost exclusively for the nobility, the merchants and the Tsarist officers. To-day, there are some 95,600 clubs and about 60,000 have amateur circles devoted either to musical or dramatic

activities. This movement is by no means confined to the towns, for 56,000 of these clubs are in the countryside, and frequently perform plays in the collective farms where, according to figures taken for 700 districts, there were no less than 21,672 dramatic circles.

These amateur groups are usually supplied with excellently equipped stages by their trade unions, in the same way as the orchestras are supplied with their instruments. In this way stage plays are not only witnessed by vast numbers of people, but participated in, for, unless this were so, there could never be the enthusiasm and the big attendance at the professional theatres.

An enormous amount of professional help is given to the amateur theatre. Indeed, there is scarcely one theatre of note in Moscow or elsewhere that is not linked to a number of amateur groups by the active work of its leading members. No matter how eminent, leading actors and producers attend amateur groups regularly. For example, Moskvina coaches at the Stalin Automobile Works; Khanayev, People's Artist of Merit of the R.F.S.F.R., coaches a large circle organised by the Financing and Banking Employees' Union, and innumerable other examples could be given. In this way the closest co-operation is maintained between the professional and amateur theatre, and there is no hard and fast line between them.

Naturally, the professional theatre benefits in the way of regular audiences who feel a link with the theatre, and also these amateur groups constantly produce new professional actors who rise to fame.

For instance, Chirkov, who played Maxim Gorki in the film, "My Universities," came from a small amateur dramatic circle in the town of Nalinsk, and Nelepina, the famous Leningrad opera star, was discovered in an amateur chorus organised at a topography school.

It is not very likely that outstanding talent in the amateur theatre could remain long unnoticed when there is so much opportunity for professionals to come into contact with it. Finally, this professional help never costs the amateur circle anything, it being regarded as part of the professional's work to take an active interest in some amateur group.

These amateur groups produce not only the well-known Soviet plays and classics, including Shakespeare, but often produce new plays that are later taken up by the professional theatres. Very often amateur groups interchange and perform at each other's circles, also at the local houses of culture, and clubs which professional companies also visit. This is especially true on the collective farms, where the great distances make it all the more necessary to send amateur groups round to many farms. These groups were a potent force during the Five-Year Plan and helped considerably by their plays to bring home to the masses of people the issues that were facing them. There is, in short, every sign of creative vitality in the Soviet amateur theatre.

Plays

Much has already been said about plays in this sketch, if only incidentally, as it is impossible to talk about theatres and omit plays, but more can be conveniently added.

In the early days after the revolution, plays of the right type were few and far between. New dramatists had not appeared, and most of those who did, wrote stuff that was too crude for the more exacting taste of the leading theatres. The Moscow Art Theatre had particular difficulty in this respect. Soon, however, names began to appear of dramatists who possessed real talent. Playwrights like Afinogenov or Kataev showed that the great tradition of Chekov and Gorki could be continued.

Gorki, in any case, was still alive and set a shining example with plays like *Enemies* and the unfinished trilogy, of which *Yegor Bulichov* was the first part.

Armoured Train was the first successful play of the new type undertaken by the Art Theatre, a play that showed Socialism in the making. Others soon followed. There was *Intervention*, Afinogenov's daring *Fear*, *The Optimistic Tragedy* and so forth. These nearly all dealt with the Civil War, a fruitful theme for many years to come.

In the beginning, when the struggle had hardly died down, people's passions were still too inflamed to watch a quiet, realistic picture, so that the early plays were often exceedingly melodramatic in character. Later, however, what became known as "socialist realism" definitely took its place as the dominating conception. This is not easy to paraphrase shortly, but it infers a view of society that is realistic, yet betrays its sociological structure. It demands that all plays, whether classics or modern, shall be seen in the light of the society in which and for which they are written. It demands, primarily, that the dramatist shall be true to life, but not only to its superficial and external aspect.

There have been many plays and dramatists of this type. Pogodin with his famous *Aristocrats* and *Kremlin Chimes*; two outstanding names have been developed since the war—Simonov and Korneichuk.

The Soviet theatre has always paid enormous attention to classics, perhaps more than any other theatre. Amongst the most frequently performed are Shakespeare's *Hamlet* and *Othello*, Lope de Vega's *Fuente Ovejuna* (Sheep Spring) and Schiller's *Love and Intrigue*, but there are countless others.

Moliere, Goldoni and many other Shakespeares, especially the comedies, like *Twelfth Night* and *The Taming of*

the *Shrew* are frequently performed. Naturally, also, a Soviet audience loves its own Russian classics, especially the work of Gorki, Ostrovski and Gogol. First-class stage adaptations have been made of the world's great novels, like *Madame Bovary*, nearly all Tolstoy (including *War and Peace*); even *Pickwick Papers* and *Balzac's Human Comedy* have been dramatised with success.

Foreign writers as a whole receive great attention, if they are of any merit. O'Neill and Shaw figure prominently on the bills, and one is always coming across other plays by well-known authors, such as Priestley's *Dangerous Corner*, until there seems to be hardly anything interesting that gets missed.

When the Germans invaded in 1941, in Moscow alone Shakespeare, Sheridan, Moliere, Benavente and Flaubert were represented—a really magnificent testimony to the wide and deep culture of the Soviet Theatre.

Soviet Theatre in War-time

The sudden onset of war and its subsequent fierce and unrelenting character did not find the theatre any less able than other departments of Soviet life to meet the new situation.

First, as the situation grew grimmer, the more eminent Moscow and Leningrad theatres evacuated bodily. The Moscow Art went to Saratov, the Vakhtangov to Omsk, the Leningrad Opera House to Tashkent and so forth. Also, as many will recall here, when in the dark days of October, 1941, it was decided to move all but the vital government offices together with the diplomatic corps to Kuibishev, room was found for the beloved Moscow ballet.

These moves may seem strange but, apart from the justification that having evacuated vital industries to the Urals and so giving the theatres a clear task to follow

their audiences, there was another reason. As one Soviet journal recently expressed it,

"The Nazis in their arrogant way declared that in the East cultural values deserve no consideration. The Soviet Union has removed these treasures and the Hitlerites will never lay hands on them."

That is how the famous theatres of the Soviet Union are seen, as "cultural treasures," comparable to old masters which it is essential to preserve.

Moskvina wrote :

"The Moscow Academic Art Theatre in coming to Saratov sets itself the aim—despite the complicated conditions created by the great patriotic war against the Fascist invaders—fully to preserve and develop its art, which belongs to the Soviet people."

It is interesting to see what the war-time repertoire of the Moscow Art Theatre has been since it moved. When war broke, it had just produced *The School for Scandal*, and among the plays scheduled were *Kremlin Chimes* by Pogodin, a play of the early struggles in 1920 and one about Pushkin by Bulgakov.

On reaching Saratov, though naturally under considerable difficulties with a theatre seating only 500 (though still with their own beloved front-curtain with its sea-gull) they not only carried out most of their plans but enlarged them.

An audience, presumably less sophisticated than that of Moscow and composed almost entirely of industrial war-workers and Red Army men, packed the theatre at each performance, and showed not only liking for the new productions, but wanted to see the old ones as well. Some of the most famous productions in the theatre's history were revived (though many had never fallen out of repertoire), even A. K. Tolstoy's *Tsar Fyodor Ivanovich* with which they first made their name in the last century.

That winter of 1941 in Saratov, one could see *The School for Scandal*, *Anna Karenina*, *The Three Sisters*,

and *The Lower Depths* besides those already mentioned. By January, 1942, *Kremlin Chimes* was produced, then the Pushkin play, and there were projected revivals of *The Pickwick Club* and Ostrovsky's *Ardent Heart*. At present, the famous French writer Jean Richard Bloch is writing a new play for them. The mere catalogue leaves one almost breathless, but what an astonishing tribute it is to the depth and vitality of the Soviet theatre.

Other evacuated theatres have similar stories but it must not be thought that theatrical life died in Moscow. On the contrary, with the improved situation last year, many new and exciting productions were seen, one of which has already been produced in New York and which English audiences may soon have the privilege of seeing.

This is *The Russians*, by Simonov, a play which received the unique distinction of being first published in *Pravda* in four instalments. It is a passionate and tense study of life in an occupied town not far from the front-line and shows people as they really behave under the conditions of modern total war. It stresses, very naturally, the heroism of the Red Army and its closeness to the people, but does not shrink from portraying a would-be, if petty, quisling. Especially it shows the Soviet citizen's passionate attachment to his home and his detestation of those who would despoil them. The fact that the hero is a local man, and the commander of the Red Army detachment, serves to emphasise that link between the army and the people. The part played by the heroine, Valya, pays tribute to the part played by the Soviet women. This play shows "socialist realism" at its best, not in the sense of false heroics, but as a living picture of bitter reality.

At the moment, however, another play is running of even greater popularity. Alexander Korneichuk's *The Front*, which is being played simultaneously in three packed theatres, is a play about the war as its title

suggests, but it takes a critical attitude. An old commander, out-of-date, always boasting about his part in the Civil War, is supplanted by a younger and more mentally alert man. This criticism of the Red Army's equivalent to Blimp received not only a tremendous reception but very full official backing. Constructive criticism has never been lacking in the U.S.S.R., despite some opinions to the contrary.

There have been other good war plays too, such as Solvyov's *A Citizen of Leningrad*, which dramatises Shostakovich writing his famous Seventh Symphony in besieged Leningrad.

There have been sad losses. Afinogenov was killed in an air-raid when fire-watching, leaving behind him a play called *On the Eve* which depicted impact of war on a village, and showed what the policy of "scorched earth" meant.

Valentin Kataev, author of *Squaring the Circle* and that lovely children's book *Lone White Sail*, has also been killed. But the theatre goes on.

Naturally, most of the new plays deal with the war, since the Soviet theatre always concerns itself with what its people are most concerned with at the moment. But there is an even greater demand for classics, as we saw in Saratov, for a people who really loves and appreciates its culture, when the whole basis of that culture is threatened inevitably turns once again to its treasures. All this would, however, be a very incomplete account of the Soviet Theatre in war-time if it left out the most important part of its work.

This is the touring companies which perform literally in the front line. Those who have seen *One Day at War*, or other Soviet newsreels may have been impressed with the way really distinguished artistes came and performed to Red Army men or to airmen right where the fight was

going on, either before moving into battle or at a forward landing-ground.

From the day war opened, no theatre company was disbanded. Instead it went to play to the Red Army. This was, in a way, no new experience for Soviet actors even in peace-time, as the theatres in the big towns had been closed during the summer months and had toured all over the country, visiting the remotest places. Also the services had always had their own theatres.

The Red Army Theatre has been mentioned, but the Baltic Fleet, for instance, founded a theatre in 1931 and has given over 2,470 performances. Its actors are members of the fleet and this is considered as virtually their sole occupation, not by any means always a soft one, as can be estimated from the fact that during the Soviet-Finnish War, though there were only 105 days of fighting the theatre gave over 300 performances in trenches, on lorries and often under fire in the region of Lake Ladoga. Now this continues on a far wider scale.

No matter how distinguished the artist, and no matter how improvised the stage, a performance is given. There is plenty of laughter—even a circus performs in this way—but plenty of extracts from more serious works. Tolstoy, Chekov, and Shakespeare are very often heard within sound of gun-fire. Many incidents are reported to show the conditions, such as the breaking off of one performance to a group of fighter-pilots while "the audience dealt with the enemy" and its resumption when they had finished. So whether it is caustic and satirical laughter at the enemy's expense or tales of stirring heroism, the Soviet Theatre has shown itself able in war, as in peace, to serve its people, without ever falling below the exacting requirements of true art.

IN THE BEGINNING

THE Soviet film occupies a distinctive place, in world cinema—as distinctive as that of U.S.A., as distinctive as that of France. Certain Russian films are recognised by all but the most jaundiced as representing the peak of cinema achievement at the time of their production—such films as *Potemkin*, *Earth*, *The Childhood of Maxim Gorky*, and *Three Songs of Lenin*. Yet there has been so far no comprehensive study of the Russian film.

In considering Soviet art forms in general, and cinema in particular, it is necessary to bear in mind the fundamental differences between the U.S.S.R. and the rest of the world. The Soviet Union is a land of unified planning, and centralised guidance of economic, political, cultural and artistic development in all fields.

Throughout the history of the Communist Party of the Soviet Union, and the genius who led it into the new society which was born in 1917, one finds intermingled with economic and political decrees, similar serious and weighty pronouncements on artistic matters, particularly the art of the cinema.

“For us, the most important of all the arts is the cinema,” was how Lenin put the question in 1918.

And this realisation was acted upon. From that time began the history of the struggle for the Soviet cinema economically and ideologically.

The cinema in Tsarist Russia was on a very low level. The producing companies were small concerns operating on normal capitalist lines, on a tiny scale, producing crude melodramas of a poor quality compared with the imported American and German films with which Russian cinemas were mostly filled. At the time of the October

Revolution most of the Russian film magnates, as well as the cinema intelligentsia, such as it was, fled the country. All that was left in Moscow was a small studio with not much apparatus, still less of a qualified staff. Protozanov was the best-known of the old regime directors who came over wholly to the Bolsheviks and curiously enough, the owner of the second and only other film concern in Moscow—Khanszhonkov—handed over his whole undertaking *en bloc* to the Soviet Government, and stayed to work in it as a technician.

Special cinemas were organised, and the first play-film to be made by them was prepared from a scenario by Lunarcharsky (Commissar for Education) in 1918. The cinema concerns throughout the country were nationalised in 1919.

Up to 1922, films were produced by committees and consisted mostly of chronicle films of May Day demonstrations, scenes at the front, the famine, the congresses etc., in connection with which the name of the propagandist of documentary film first appears—Dziga Vertov. At the same time the State Institute of Cinema, founded in 1919, under the direction of Gardin (now people's Artist of the Republic) began producing short film plays with the group of Kuleshov.

KINO-EYE

Lenin placed great stress at that time on the importance of the documentary and chronicle film. This, however, was converted by Vertov and his school, "Kino-Eye," into a dogma:

"Only documental facts—no film-play illusions—down with the actor and scenery—long live the film of actuality."

Thus were produced the weekly chronicles and short documentaries *Kino-Pravda*, and the full-length documentary films *One-Sixth of the Earth*, *Strides of the Soviet*, etc.

Kuleshov, at the State Institute of Cinema, took the opposite view. He advocated the study of the American feature film, particularly the Western, and its adaptation to the Soviet cinema. His first attempt at this was a frank copy of the Wild West thriller entitled *Mr. West visits the Soviet Union*, which showed the adventures of a tourist who visits Russia fearing to be shot at every corner. One of the actors in this film, a student of the Institute, was Vsevolod Pudovkin—later to become one of the world's most famous directors.

Pudovkin now relates with pride the terrible difficulties that had to be overcome in the making of pictures in those early days. There was no coal, no fuel, no light, very little food, hardly room to work in. They studied in thick overcoats and felt boots—when they could get them. They had to gather together material for their scenery from all kinds of flotsam and jetsam. Even the projectors had to be hand-made. Every possible thing had to be economised. Every yard of film, every kopeck, had to be fought for. This accounts in part, no doubt, for the shortness of the shots in early Russian films.

Thus, in the midst of hunger and blockade, of cold and poverty, intervention and counter-revolution, Soviet cinema art was born.

FEATURE FILMS

I have already mentioned the planning of cultural and artistic development in the U.S.S.R. Sceptics say that such planning or control must be detrimental to art. Yet it is interesting to note that the world-renowned silent films of the U.S.S.R. were practically all "made to order"—the order of the Soviet Government. Eisenstein's *Potemkin* was to be part of a series of films dealing with the 1905 Revolution and was planned in conjunction with the Government.

After his first apprenticeship with the Kuleshov group, Pudovkin made a film called *The Chess Player*, and a scientific film, *Conditioned Reflexes*, based on Professor Pavlov's researches.

Then came *Mother*, adapted from Maxim Gorky's novel. Here we see the next development of Soviet cinema, the beginnings of individual characterization—in the form of types. The use of types, that is, non-actors, or actors chosen principally for their appearance, whose acting, so to speak, is created in cutting (montage), later reached its limits in *Storm over Asia* by Pudovkin; *The General Line* of Eisenstein; and *Ivan*, by Dovzhenko.

Meanwhile, another director of first rank emerged from the Ukraine—Alexander Dovzhenko, who combines the culture of Eisenstein and the emotion of Pudovkin with the passion of national originality. Concurrently with the great historical films of Moscow and Leningrad, Dovzhenko made *Arsenal*, a powerful film of the Ukrainian revolution, followed by *Earth*, probably the most superb of peasant films, showing the new order in the village and the struggle for its creation merged with the eternal struggle of life and death.

NEW BABYLON

In Leningrad, Kozintzev and Trauberg, after their historical film of the Paris Commune, *New Babylon*, also attempted to deal with new problems, and produced the antithesis of *Ivan*—a film *Alone*, in which the city intelligentsia goes to the village, fighting the age-old traditions, building a new society and, at the same time, re-creating themselves.

But life goes faster than the films. The Soviet cinema industry still took too long to make its big pictures, anything from two to three years—so it was not surprising that often the product was out of date on its completion, and hence could not be shown.

The introduction of the sound film applied the brake. Once more the Soviet cinema had to start at the beginning, both technically and artistically, to master in two or three years what the U.S.A. had been studying for fifteen years. For two or three years no film of significance emerged, nothing that can be compared with the best silent films.

The second Five-Year Plan commences—the country is now back to normal, goods appear everywhere in the shops, the collective farm becomes the predominant form in the village, the harvest is the biggest on record, there are diplomatic successes abroad, fulfilment of plans for heavy industry—"The last year of difficulty"—such was the slogan of 1932.

With all this comes an increased demand for cultural entertainment, more plays, more music, more films, more life! And lighter entertainment makes its appearance. The themes of personal relationships, of love, of the new attitude to work and society—these now come to the fore, but without being isolated from the mass.

Counter-Plan, by Ermler and Yutkevitch, is the first sound film of significance dealing with these problems. But it remained in splendid isolation while other directors either meditated lengthily over their scenario period or else tackled the more difficult problems of personal characterization through the classics.

SONGS OF LENIN

Dziga Vertov, still persistent in his documentalism, now produced probably his greatest film—greatest because of its content—*Three Songs of Lenin*. Such a theme could not fail to arouse the emotions of Soviet audiences.

A musical comedy film by Alexandrov, *Jazz Comedy*, introduced a new note to the Soviet screen with, however, very little Soviet content. It showed, however, that Mos.

cow's Hollywood could do all the tricks of American cinema.

It was followed by *Circus*, which dealt with the problem of the colour bar in the United States and showed how the U.S.S.R. had solved such questions.

Then came a bombshell—a film by almost unknown directors which broke all records and filled the cinemas as no film had done since *Potemkin*, and caused more articles, more Press, more demonstrations than any film since the golden age of silent films—it was based on a theme that was generally considered to have become boring for Soviet audiences—the civil war. It turned upon the great friendship of a partisan hero after whom the film was named, Chapayev, with the Party leader in his division.

A new quality had entered the Soviet cinema, a synthesis of the best of the silent films with a masterful character presentation and story.

Chapayev was not an isolated event, for following rapidly upon its heels came *The Youth of Maxim* and *The Return of Maxim*, by Kozintsev and Trauberg, dealing with the evolution of a Bolshevik in the 1905 period, and *Peasants*, by Ermler, dealing with collectivization and the work of the Bolsheviks in the village.

With these fine films the Soviet cinema arrived at its fifteenth anniversary, and the Government and the Party showed their appreciation of its significance by rewarding the leading directors, cameramen, actors, administrators, etc., with the highest honours of the land—no other art has ever received so many titles.

Among the list of those honoured we find once more the name of Khanszhonkov—the former Russian capitalist who has now been given a life pension by the Soviet Government for his services to the revolutionary cinema.

Since that anniversary, there have been many films of outstanding significance, too many to mention here. *New*

Gulliver, undoubtedly the finest puppet film ever made, and at the same time a full-length feature film, must be recorded. The producer, Ptushko, received the title "Honoured Art Worker" for his masterpiece, which took over two years in the making. He is now preparing a coloured puppet film.

COSTUME DRAMA

The historical costume drama is represented by the film *Peter the Great*, based on a scenario specially written by Alexei Tolstoy. The film shows Peter, not as a mere tyrant but as the ruthless representative of the progressive elements of the society of his day, fighting against the age-long backwardness of Mother Russia, scheming for developments which were only realized after the October Revolution. This was one of the most lavish productions of the last ten years, equalling Hollywood in its employment of thousands of extras.

A remarkable film for the twentieth anniversary of the Revolution, *The Last Night*, was produced by another young director, Raizman. The action takes place at the end of October, 1917, during the last night of the Kerensky regime in Moscow, before that city followed Petrograd in revolt. It affords another example of highly concentrated action in a very limited time, developing every character to the fullest extent.

These last two films present an interesting contrast to those made for the tenth anniversary of the October Revolution: *Ten Days that Shook the World*, and *The End of St. Petersburg*, which had an action extending over a long period of time with very little development of character.

We from Kronstadt, by Dzigan and Vishnevsky, is the only modern film comparable in form as well as content with the classic silents. It has been widely reviewed in London and needs no further comment.

A film that has received much acclaim is *Lenin in October*, by Michael Romm, who made *The Thirteen*. By its title it challenges comparison with Eisenstein's famous *October*, but cinematically it will not bear comparison. One of the greatest actors in the Soviet Union, Shchukin, plays Lenin with extraordinary fidelity, but though one pays tribute to his wonderful make-up, voice and gesture, there is a tendency to be too self-conscious and deliberate. The film is notable in portraying for the first time Stalin, Dzerzhinsky, Lenin and others at their famous meeting on the eve of the Revolution, at which Lenin attacked Zinoviev and Kamenev for their betrayal of the Central Committee's decision.

This film was very popular in the Soviet Union, but as a work of art it lacks the imagination and inspiration of the silent classics on the same theme. One is too conscious that everything has been checked up with the documents and facts.

Pudovkin made a film based on the life of *Suvorov*, one of the greatest military strategists of Russia, and *Minin and Pozharsky*, the story of two great patriot defenders of old Russia. Eisenstein's *Alexander Nevsky*, deals with a great Russian leader of the thirteenth century who drove the Teutonic Knights from Russian soil. Its effect was heightened by the splendid music written for it by Sergei Prokofiev. Released for the screen in 1938, with a theme 600 years old, it had a message which was topical then and is still more so to-day.

2,000 SOLDIERS

This film contained one of the great spectacles of the screen, the battle on the ice of Lake Peipus. An unexpected attack by Nevsky on the Germans forces them to retreat across the frozen lake, which cracks under the weight of their accoutrements, and they are engulfed. For

this, Eisenstein had a special artificial iced lake built. The number of soldiers engaged was 2,000.

The "German invaders" were members of a school of physical culture dressed in thirteenth century armour. The whole of the engulfing was conducted by military engineers. The ice, weighing $17\frac{1}{2}$ tons, floated on hidden rubber pontoons. At the command of an officer, hidden from the camera, the "invaders" slowly let out the air from the rubber pontoons, which gradually sank with the soldiers. Immediately the scene was shot there was a roll-call to make sure that nobody remained under the ice. All precautions were taken, with expert life-savers, divers and safety-first men. The whole scene was shot without any untoward incident.

Remember this film was started in 1937 and how prophetically correct it was can now be seen.

Further evidence of the awareness in the Soviet Union of the menace of Fascism is provided by films dealing specifically with Nazi oppression in Germany. In 1935 Gustav Wangenheim, a German refugee, made *Der Kampf* (The Struggle), a film dealing with the Reichstag fire and the Leipzig trial. In 1938 Roshal made *The Oppenheims*, based on Feuchtwanger's novel of the Nazi war against culture; and Minkin and Rappaport made *Professor Mamlock*, based on Friedrich Wolf's play on anti-Semitism in Nazi Germany. This last film, once banned by the British censor, was released here (heavily cut) after the outbreak of war and achieved a great popular and artistic success.

CHILDREN'S FILMS

A Soviet Children's Film Studio was formed in 1926. This new departure meant now that a centre was created to specialise in children's feature and story films. Amongst the outstanding films to come from this studio are such masterpieces as the trilogy on Gorky, of which the first and

third parts have been seen in England, under the titles *The Childhood of Maxim Gorky* and *My Universities*. The Second, *Out in the World*, has yet to be seen here.

The director, M. Donskoy, has proved himself to be one of the great masters of the cinema, for there is no doubt that *Childhood* has re-created Gorky's own in another medium to perfection. So often the transition from book to film ruins or completely distorts the original.

Another beautiful film to come out of this studio is *Lone White Sail*, directed by V. Ligoshin. It is a children's adventure story immediately following on the revolt of the warship "Potemkin." This studio has produced a number of full-length fairy tale films in colour, such as *The Little Hunchbacked Horse* (directed by A. Rou). In production values, these films rank as high as any produced in Hollywood, even though they still use the two-colour system.

One of the latest full-length fairy tales is called *The Magic Seed*, based on the Aladdin myth in a Russian setting. Like *The Little Hunchbacked Horse*, it has recently been exhibited in London.

Parallel with the development of the great Russian film productions ran the activities of the studios of the non-Russian Republics. Dovzhenko continues to produce his Ukrainian masterpieces and made on the suggestion of Stalin, a film about the Ukrainian Chapayev, *Shchors*, bearing his name.

WAR FILMS

Since the war the Soviet cinema has mobilised all its forces for work of national importance. Over 160 cameramen, many of whom have been killed in action, were engaged along the vast front in 1942. Their work was used not only in newsreels, but in the making of full-length films, such as *One Day at War* (in which the whole 160 participated). This film was a remarkable record of one

day on the Soviet front, filmed simultaneously from the Finnish lakes to the Black Sea coast. This film had a considerable success in this country.

The Documentary and Newsreel studios record systematically the whole of the war activity behind as well as in the line. One of the most impressive films produced as a result of their work was *Justice is Coming*, the record of the Kharkov trial of war criminals, one of the grimmiest cinematic works ever produced, which impressed all who saw it by the stark simplicity of its recordings.

This film when shown at the Tatler Cinema in London, did business far above the average for that house, although it synchronised with the early stages of the flying bomb, when almost every other cinema in London was registering a low record in box office receipts.

Other documentaries which were highly praised by Press and public alike (or that section of the latter which was fortunate enough to see them) were: *The Defeat of the Germans near Moscow*, *The Battle for the Ukraine*, *The Drive to the West*, and *The Partisans*. The last-named was shown in this country with a commentary by J. B. Priestley, and was received with enthusiasm wherever it was exhibited. But bookings were far fewer than its merits justified.

An interesting wartime innovation is the speed-up in production as a result of the division of labour, whereby all feature directors make shorts and two or three-reel film-plays, which are tied up with some transitional scenes and made into feature length. This enables the time of making to be cut by two-thirds. The first of these shorts were issued separately (with English dialogue for exhibition in this country and the U.S.A.). They were *A Hundred for One*, *Strong Point 42*, *Three in a Shellhole*. It is a feature of Soviet shorts and composite films of the kind ~~and~~ ~~used~~

that they cover the whole international field of the anti-Nazi struggle, and not just the Soviet front.

As well as numerous documentary films of this kind, the Soviet News Reels Studios have produced a weekly newsreel with sometimes extra issues, and this year (1944) a new series of regular newsreels was started entitled *News of the Day* and *Front Line News*. These present popular news in a more snappy form.

The News Reels Studios are now quite separate from the documentary film studios, to which leading feature film producers have been allocated as supervisors, this as a result, it is said, of that superb film *The Battle of Russia* made by a feature film producer, Frank Capra, from Soviet documentary film material. An example of how Soviet authorities are quick to learn from outside experience.

CAMERA MEN AT WAR

Here is an account from the Soviet Press of cameramen at the front, which gives an intimate insight into their great work.

"Newsreels are always showing us the exploits of pilots, infantry, artillery fighters, mortar-gunners, tankists, scouts and guerillas. But there is one class of front-line heroes who run the same risks, are just as daring, but who are never featured in the camera because it is they who crank the camera.

"Here are two of them—Captain Leonid Kotlyarenko and First Lieutenant Semyan Stoyanovsky.

"Both were born in 1917, both of them graduated from the Cameraman Department of the Moscow Cinema Institute in 1940, both were serving in the army when the war broke out and on the third day were already at the front. For almost the entire period they have been working side by side...

" 'How do you make your shots during a battle?' I asked the friends.

" 'Not so much time to go in for film composition,' answered Stoyanovsky. 'The Fritzes don't even give us a chance to focus decently, so we simply mark our target and shoot without any preliminaries.'

" 'And how does it turn out?'

" 'We've got the knack already, and feel for the right place.'

" 'When the Germans approached Vladikavkaz,' interrupted Kotlyarenko, 'I filmed the defence in the very city. Then I filmed the smashing of the same enemy groupings in the same place. And it's a funny thing—usually you hunt for good material, but here I shot everything around me on a 360 degree range and everything I shot was used.'

" 'What have been some of the tightest corners in your work?'

" 'All kinds,' said Kotlyarenko. 'For example, during the summer of 1942 when two of us took shots of an armoured train near Taganrog. We worked during heavy artillery fire..... everybody else was in the train with a coat of armour around him, and there were the two of us outside, a fine pair of targets. But you couldn't very well film the train from the inside. Senya! You tell about the landing.'

"BLACK AS YOUR HAT!"

"And Stoyanovsky began.

" 'It was in the autumn of 1943 . . . Cold! With a northeaster blowing. Night as black as your hat. After the preparatory bombardment, a landing in the Crimea from the Kerch peninsula began. This was on the 3rd November, and, on the dawn of the 4th, operator Kaznacheyev and I got in a speed boat and started out

across the strait from the tongue of land called "Chushka" in the wake of our landing party. Chushka is about ten miles long and about thirty yards wide. Our boat was under enemy gunfire. We had a distance of only two and a half miles to go, but the water was completely mined, and German planes kept circling above us. You can imagine that our chances were slim for a safe landing, and our feelings were accordingly! But that was only at first. Then our ears got used to the din and the work gripped us and we were so eager to record the heroism of our fighters that we forgot all danger. Besides which, you can't help being brave when you're surrounded by our Red Army men.

" 'We front-line cameramen take professional pride in being amongst the first to break into newly liberated towns together with our advance units. That's the only way to catch striking combat moments, the flight of the Nazis, the capture of prisoners, and especially that thrilling moment when the inhabitants greet our troops.

" 'We were lucky enough to be among the first units to enter Mozdok, Prokhladny, and Georgievsk.'

" 'How do we move around?'

" 'At first they gave us half-ton trucks. But after a few months' experience during which we often found ourselves without a roof over our heads, we made our own machine, enclosed it with felt, set up a stove, furnished it with tables, lamps and divans, and now our truck has become a fine living room, office and workshop rolled into one. And that's how we carry on with our front line work.'

" 'We're both witnesses of and participants in this war,' concluded Stoyanovsky. 'Our newsreels are live documents for public approval. This stimulates us, and fills us with a sense of responsibility, and enables us to forget the hazard of our work.'

TECHNICAL FILMS

From the very first days of the war Soviet scientific and educational-technical cinematography transferred its attention to the production of military and defence films. The personnel of educational cinematography was confronted with the task of assisting the Red Army in training reserves, of producing films which would help newly formed units to make the best use of their armaments and to master the technique and tactics of modern warfare in the shortest possible time.

During this first period, educational-instructive films, such as *How to Fight Enemy Tanks*, *How to recognise Enemy Aircraft*, *How to Combat Enemy Mines*, *Learn to Handle the Enemy's Arms*, and others of the same trend were produced. Many of them were made to illustrate the special programme used in the course for universal compulsory training. These titles included *The Soldier in the Ranks*, *Be a Sharpshooter*, *A Sniper's Gun*, *Pocket Artillery*, *The Anti-Tank Gun*, *Infantry against Aircraft*, and special series such as *Ski Training for Soldiers*, *The Degtyarev Machine Gun*, and *Behind a Smokescreen*.

The second year of the war confronted the educational cinematography with new tasks. Now each military theme was considered from the point of view of the tactics of offensive operations in contrast to the active defence character of the films produced in 1941. This explains why films on tactics predominated among the productions of war films in 1942.

A group of cinema workers headed by directors V. Schneider, V. Suteyev and E. Kuzis, went to the region round Stalingrad and also to the Western Front where they filmed documentary material right on the spot, their cameras recording the fire nests and the strong points from which the Germans had been ousted. Prominent military specialists at the front lent active assistance in

the filming of this picture, *German Defence and How to Smash It*.

Forcing Rivers, a film directed by N. Sokolov, deals with a very pertinent theme in modern warfare. Ferrying troops across a river in the face of heavy enemy fire is one of the most complicated and involved operations of modern warfare. This film presents the whole operation, from the reconnaissance of the adjacent terrain and the sector where the crossing is to be effected to the engineering work and the actual crossing of the river. Another tactical film—*Reconnaissance and Surmounting Obstacles in Offensive Operations*, directed by Z. Drapkin, depicts the operations of sapper troops which ensure the uninterrupted movement of tanks, artillery and infantry.

SPREADING KNOWLEDGE

One of the most important problems at the beginning of the war was that of the military preparedness of the population and of popularising military knowledge among the general public.

A series of instructive propaganda films aiming to acquaint the general public with the rudiments of military training was released during the first months of the war. Some of the titles in this series were *Learn How to Handle a Light Machine Gun*, *The Self-Loading Rifle*, *How to Dig In*.

The population of Moscow, Leningrad and other front-line cities learned the tactics of civil defence from the A.R.P. film series; *What to do when the Alert Sounds*, *How to Black out Your Home*, *How to Put Out Fire Bombs*, *How to Build Warm and Gas-proof Slit Trenches*. These films greatly helped in training the population to combat enemy air raids.

Among the popular military films produced during the first months of the war mention may be made of the

historical film sketch by Merited Arts Worker Kaufman, entitled *So It Was: So It Will Be*, describing the rout of the Germans in the Ukraine in 1917. Here in vivid episodes was the story of how the Germans invaded the Ukraine in 1917 with the fond hope of turning it into a colony of the German Reich, how the whole Soviet people turned to smite the Germans in revenge for the blood they had shed, the pillage and violence they had wreaked everywhere.

MEDICAL FILMS

Special problems of army medical service were treated in films produced for medical courses and schools. These included *Military Field Surgery*, *The Treatment of Gun-shot Wounds*, *Cranial-cerebral Wounds*, *Bone Stretching and Therapeutic Physical Culture in Treating War Injuries*. The subject of first aid and surgical treatment of wounded was presented in the following films:—*Know How to Give First Aid*, *The Prophylaxis of Frostbite*, *Initial Treatment of Wounds*, *Therapeutic Evacuation Service*, *War Medicine at the Western Front*.

A popular presentation of the role of medicine in the present war was given in the film *Red Army Medical Service*, directed by V. Korin and T. Lukashevich, now available in English from the Soviet Film Agency.

This picture acquainted the general public with the system and organisation of medical service for both wounded at the front and in medical institutions in the interior. The film shows how first aid treatment is rendered to the wounded during battle, the heroic and selfless work of the company medical personnel; the work of the regimental aid post, the advanced dressing station, the field mobile and the clearing evacuation hospital. The film included actual scenes of operations performed by Academician N. Burdenko, Chief Surgeon of the Red Army and his assistant, Professor S. Gergolav.

Another film, *Survey of the Peripheral Nerves*, with an English commentary by Dr. E. Loutit, is now to be had from the Soviet Film Agency.

Revival of Living Organisms is a film showing some of the most amazing experiments in the history of science, the problem of the resuscitation of life. It shows how dogs which are clinically dead from ten to fifteen minutes are brought back to life. The experiments here shown were made before the war and have now proved themselves of the highest value in that Red Army men "dead" for many minutes have been brought back to life. This film is available in English from the Soviet Film Agency.

Another short film of medical and human interest, entitled *A Rare Operation*, shows a Red Army officer who has been shot in the heart and faced it would appear with inevitable and an almost immediate death. The operation reveals the bullet is inside the heart. The surgeon extracts it, sews up the puncture and the heart stops beating. Massage is applied, artificial respiration and injections and slowly the heart starts beating again. The same film shows how two months later the same Red Army officer, his wound healed, puts on his uniform and goes back to the front to fight again.

DOCUMENTARIES

The film *Siberia in Wartime*, produced by Honoured Art Worker M. Kaufman and directed by Y. Zadoroshin and A. Litvinov, tells how in the stern days of war Siberia undertook to fill the gap left in production by the loss of the districts temporarily occupied by the Germans. People from the Ukraine, Byelorussia and Leningrad, forced to leave their homes by the hated invaders, came to remote Siberia in the East to help start factories evacuated from the front-line zones and to build new factories where they could forge formidable armaments for revenge. It shows

how the vast natural resources of Siberia are being converted into armaments that lay the enemy low.

Behind the Urals is a film of a similar nature, showing for the first time the great new industrial towns that have sprung up in the depths of Russia and whence came the staggering flow of arms that surprised the Germans and the world.

SCIENTIFIC

Such popular scientific pre-war films as *Pushkin's Manuscripts*, *The Tretyakov Gallery* and *In the Depths of the Sea*, testified to the great possibilities open to cinematography in this particular field. These films showed that their directors had found a special style for this type of picture, a system and means of expression which essentially differed from those of full-length films, although the popular scientific film made full use of the experience gained by the former type.

The director of a popular scientific film must be both investigator and an artist. He must combine the curiosity of the scientist with the fervour and fantasy of the artist. Work has already begun on a number of such films. They encompass the most diverse spheres of science, technique and culture.

Stalin prizewinner A. Zguridi made a series of popular films of natural selection in the process of development of the animal and plant world—*In the Depths of the Sea*, *The Force of Life*, *In the Sands of Central Asia*. This last film is now available in England—a copy was presented to the Royal Zoological Society by the Soviet Film Agency. Zguridi has started work on a film called *White Fang*, based on the story of the same name by Jack London.

Up to now films on biology have restricted their scope to documentation of actual phenomena in nature, but the

experience already acquired in this field will now enable scientific cinematography to undertake a more involved task, that of reproducing one or another phenomenon in nature. The struggle for life and existence in the animal world will be shown in a film presenting the life history of a wolf family in all its relations and with its environment and with man.

The director, N. Doling, is engaged in preliminary work for a film on biology to be called *The Law of Love*, a film demonstrating the maternal instinct in nature, the feeling of parental loyalty in the animal world.

RECORDING THEATRE ART

Work has also begun on a film describing the best actors of one of the most famous theatres of modern times—the Moscow Art Theatre. This film, to be directed by Yurenev, will deal with the problems of the actor's art and will show the culture and skill of this theatre's finest actors—Kachalov, Moskvina, Khmelov and others. Basing its material on concrete examples taken from classical and modern repertory the film is to show whence the Art Theatre, as a theatre of vital truth, draws its realism; how the production of a new play is effected—from the first reading of the script to the portrayal of each character in the finished performance. Regisseurs of the Art Theatre are to take an active part in the making of this film which will be a sort of scientific documentary description of one of the most significant phenomena in the history of the Russian theatre and of Russian culture.

Besides popularising the achievements of science and technique, the monthly film review of that name devotes considerable attention to the people who introduce new methods and efficiency in production. Special issues and separate items in the review are given over to descriptions of how labour efficiency in wartime is constantly being in-

creased by the resourcefulness and inventiveness displayed by workers.

JUVENILE NEWSREELS

Pioneer World, a special newsreel for Soviet school-children, is one of the most popular issues of the Central Studio of Documentary Films. Originated and launched thirteen years ago by Arsha Avanesova, its permanent director, it has filled a great need.

From their own newsreel young Soviet filmgoers see how children live in different parts of the vast Soviet country. Children of the south who have never seen snow look wide-eyed at children of the distant north, smothered in furs, riding to school behind teams of reindeer. Little Ukrainians and Byelorussians are charmed by the deft hands of Uzbek and Tadjik children picking cotton at record speed. Young fishermen on the banks of the Volga watch their far-eastern comrades hunting in the taiga.

Pioneer World records life at Soviet schools, children's clubs, manual training shops, sports stadiums and camps. During the war it has featured the adventures of evacuees in their new surroundings.

Arsha Avanesova, the director, herself has two children who were evacuated on the outbreak of war to Alma Ata, the capital of Soviet Kazakhstan.

Pioneer World reflects the initiative, energy and inquisitiveness of Soviet children, of young people working in factories and collective farms, of little warriors who remained on occupied territory and helped the partisans.

TRAINING

A unique feature of the Soviet cinema is its planned education of new forces for cinema art and the cinema industry. There are Higher Institutes of the Cinema in

Moscow and Leningrad, at which the training of directors, cameramen, scenario-writers and actors is undertaken with, of course, men and women having equal opportunity to study.

The Institute's training is given free of charge, and each student receives a stipend from the State so that he can continue his studies without financial worry or diverting his energy to "working his way through college."

Both institutes are equipped with their own studio and every kind of cinema apparatus—rehearsal rooms, art rooms, laboratories, etc. Furthermore, they have unique international film libraries.

When the present writer was in the Moscow Institute in 1930 to study in the Directors' Faculty, the course spread over four and a half years. About two-thirds of this time was devoted to theoretical and practical work in the Institute itself, and about one-third to practical work in the actual cinema studios or on location. Work in the Institute took place mostly in the autumn, winter and early spring, and consisted, in the case of the directors' faculty of nearly thirty subjects, including philosophy, political economy, sociology, the fine arts (all of them!), literature (Western European and Russian), history of the world cinema and theatre, scenario writing and montage, play and film production and technical subjects directly associated with the cinema, photography, lighting, make-up, set designing, studio organisation, etc.

EISENSTEIN THE TEACHER

The great director Eisenstein is a Professor at the Institute, and his particular subject is the theory of film direction. In this course he synthesises the knowledge gained in other classes. Here is a practical example of his unique teaching methods.

Our particular faculty was asked to prepare a theatrical analysis of Julius Caesar's assassination in the scene from Shakespeare's play.

For this purpose the whole class of about thirty students was divided into four groups, each group had to stage a theatrical production of the scene and enact it itself. It did not have to be a finished production but only from the director's point of view, i.e., to know the theme of the scene, its build-up, its climaxes, its *mise-en-scene*, etc.

Then each group went through the *mise-en-scene* under Eisenstein in front of the rest of the class. Each group was criticised by the whole faculty and its teacher. Furthermore, each individual had to work it out on paper clearly and distinctly, so that at any time it could be reproduced exactly as the director had planned; after this every student was asked by Eisenstein to work out for himself on paper the cinema montage of the same scene based on his preliminary work with the group.

In the first stage this montage was to be as for silent cinema with the minimum of sub-titles. Every student, however badly or well he could draw, had to sketch each shot in this montage sequence, that is, he had to be able to put on paper enough of his visual ideas so that his conception could be clearly understood and carried out by the cameraman.

The next stage would be the working-out of the same sequence in sound-film and then in colour-film. In this particular example alone it will be seen that Eisenstein took his students step by step through the evolution of cinema art.

The separate arts, as studied in the other classes, had their synthesis in the theatre, then in the silent film and were then finally synthesised in a sound-colour film.

The results were fascinating. Out of four different theatrical productions of the scene came thirty different cinema treatments of the scene, clearly designed on paper.

MONTAGE

Another method in the training of the basic theory of montage was to give a student a famous painting, a static two-dimensional art-work, and ask him to transmute that painter's particular subject and treatment into cinema treatment.

This meant that first of all the student director had to analyse the theme, the subject matter, the idea and social outlook of the painting, and then its composition—graphic, colour, light. Then he had to proceed to find its equivalent elements in the dynamic four-dimensional form of the cinema.

The recently published book *The Film Sense*, by Eisenstein, is based on lectures given by him in the Institute. From this it will be seen how complex and erudite was his particular course.

Alongside with this theoretical subject the student-director would then go into his Institute Studio and carry into practice a short cinema sequence that he would have worked out during the theoretical work. He would then have to collaborate practically with student-cameramen and student-actors.

As an example of another side of the work, actual montage was studied under the famous woman film director, Esther Shub, who would give a sequence from a classic film and ask the students to re-edit it in their own way. They would then see the results on the screen, mutually criticise it and draw their own conclusions.

In the study of music, student musicians from the Conservatoire of Music would come to the Institute for a particular class. A quartette, for example, would play chamber

music and on the spot the teacher would analyse every aspect of the work from the musical to the social.

PRACTICAL WORK

The practical work in the film studios themselves was a progressive course, i.e., a student-director of the first year in the Institute would go as a fourth assistant—a clapper-boy—to a particular group. The second year, if his previous work was satisfactory, he would go one up the scale and so on until he became an assistant director, having gone through the whole routine of practical studio procedure. So that before he actually graduated, the Institute could decide, on the results of his progress in the Institute and the Studios, whether he should specialise in say, documentary films, scientific films, children's films, feature films, etc., and according to this grading he would graduate from the Institute and go straight to work. In the Soviet Union one does not have the idiotic situation where a student finishes school holding a paper diploma in his hand and cannot find anywhere to work.

Furthermore, in the distribution of students to studios, his nationality is taken into consideration, so that if he comes from Armenia or Georgia, in all likelihood he will go back to the Armenian or Georgian film studios for his practical work, unless he himself expresses the wish to do otherwise. At the time when I was studying at the Institute there were about thirty nationalities represented. In my own particular study group was a Russian peasant, an Armenian, a Korean, and myself, an Englishman. Apart from the other Institutes, Moscow has an Institute for the training of cinema technical workers, and a Scientific Cinema Research Institute, dealing with such problems as colour, stereo-scopic films, etc., for example. Moscow now has a cinema projecting stereoscopic films. From all accounts it appears that they have solved the problem.

ORGANISATION

The whole of the film industry of the Soviet Union is controlled by the All-Union Committee for Cinema Affairs, under the chairmanship of Ivan Bolshakov. This is part of the Council for People's Commissars. There are film production studios in each of the separate Republics, the Moscow Potilikha being the largest, containing four main groups for the production of feature films. At the outbreak of war there were 11 film studios for the production of feature films. Four of them are of All-Union significance—"Mosfilm" in Moscow, "Lenfilm" in Leningrad, Film Studios at Yalta in the Crimea, the Children's Film Studio in Moscow, which produces feature films specially for child and youth audiences, many of which, however, turn out to be of great interest to adults. There are also National Studios in the main non-Russian Republics.

At the end of the Second Five-Year Plan the productivity of all these studios was about 110 full-length feature sound-films per year.

Future plans included the building of new studios in Byelorussia, Armenia, Azerbaijan and Middle Asia, and the projected output was to be increased to 150 full-length sound-films a year. It is clear, however, that even this quantity was far below the demands of the vast population of the myriad nationalities of the Soviet Union.

The reconstruction of the Soviet cinema and its basis actually began to take place in 1935. Existing studios were adapted to sound-film and new technical factories were built for the production of cinema apparatus of every kind. In 1935 there were five such factories, six chemical factories for making and distributing film stock, eight factories for making copies of completed films; then there is a Building Trust specially concerned with the planning and building of new cinemas.

In the Second Five-Year Plan new technical film studios were constructed in Moscow and Leningrad, and the output was increased to 130 full-length sound-films for educational purposes a year. At the same time, over the periods of the First and Second Five-Year Plans there was a very big development in the production of Soviet newsreels. The State Trust Soyuzkinozhroniki consists of four big studios in Moscow, Leningrad, Kharkov and Rostov, and thirteen production bases in Republican and provincial centres. In the Second Five-Year Plan new newsreel studios were built in Kiev, Khabarovsk and Alma Ata. In 1935 yearly production of newsreels amounted to 600 issues, in 1937 to over 1,000.

STOCK AND APPARATUS

Prior to the Five-Year Plans the Soviet Union imported all its cinema stock from abroad. In the First Five-Year Plan two film stock studios were built. In 1935 they produced 120 million metres of film a year; in 1937 a new film factory was finished in Kazan with an output of 200 million metres, and in 1938, 320 million metres per year were produced, and thus placed the Soviet Union in the third place (after the U.S.A. and Germany) in the world for production of film stock.

New factories for the production of copies of films were built in the First Five-Year Plan in Moscow, Leningrad, Kiev and Tiflis. In 1936 construction was begun of new big factories for making copies of complete films in Kazan and Pushkino. Thus, before the war, the total possible output in these factories was 250 million metres of film, or 100,000 full-length films.

CINEMA FACTORIES

A series of specialised enterprises were built for the production of cinema apparatus in Leningrad, Odessa and

Kuibishev. In Moscow a new Experimental Factory Institute was built to carry on research work in new developments of cinema technique and to produce apparatus for sub-standard films. A number of factories of the People's Commissariat of Heavy Industry participated in the production of light apparatus, electrical cinema apparatus, etc. In 1935 there were 30,000 stationary and mobile types of cinema projection in use. Of these 10,200 were in the towns and 19,800 in the villages (not counting schools and the Red Army). In 1936 there were 9,000 sound projectors in use.

The Third Five-Year Plan had as its aim increasing the number to 50,000 standard and 40,000 sub-standard, with 35,000 electrical generating apparatus for mobile screens. How far the plan was fulfilled at the outbreak of war is, at this present moment, difficult to ascertain.

The accommodation for spectators calculated on the basis of annual occupation of seats rose as follows:—

1928, 310,000,000 seats; 1935, 625,000,000 seats; 1936, 710,000,000 seats; 1939, 950,000,000 seats, and it was planned to increase this to 2,700 millions by 1942. This plan was rudely interrupted by the war.

SUB-STANDARD FILMS

In 1935 the Soviet Union began production of sub-standard films and apparatus; 4,600 sub-standard projectors and 3,000,000 metres of non-flam film were produced. In 1936 they produced 6,500 silent sub-standard projectors and 10,000,000 metres of film. The Plan envisaged that production was to increase output to 20,000 16 mm. sound projectors a year, and at the end of the third Five-Year Plan (1944) to 40,000 sound projectors.

A new feature of Soviet cinematography was the production of 16mm. projection apparatus specially for home service, and an organisation was developed whereby any

of the Soviet films could be hired on 16 mm., complete with projector and projectionist, who would go anywhere to club or home and give a private screening. Just before the war, the Cinema Research Institute had perfected its 16mm. camera which was already being put into production so that eventually any person could become an amateur cinema photographer. This was linked up with the general policy of decreasing working hours in which the whole population would enjoy more time for creative leisure. Already music, drama, etc., play a colossal part in their leisure hours, and now amateur cinematography was coming to take its place as a hobby.

The production of films and all kinds of film stock and apparatus is also controlled by the All-Union Committee for Cinema Affairs.

In relation to the Republican organisations the Cinema Committee fulfils a plan regularising the functions and supplying them with film stock and apparatus. The Union Republics have their own Cinema Committees for the production of films and cinema development, which are directly under the control of the Council of People's Commissars for these Republics.

CENSORSHIP

A film is finished in the Studio and before distribution it comes before a special commission of censorship which, broadly speaking, decides the questions: (1) Does it transgress the constitution of the U.S.S.R. ?; (2) Does it offend public morality ?

This commission can ask for scenes to be deleted or re-shot as the case may be or can entirely scrap the film. Films are also seen privately by the artists, technicians and workers of the cinema industry at their own Club, where they have a chance to make suggestions.

This Cinema Club plays a great part in the hammering out of theory and development of styles and criticisms and productions, because like nowhere else in the world the producers, directors and cameramen are in the same "firm" and are able to criticise each other with the greatest of ease and with frankness that would appal any foreign film artist or technician. Some of the most thrilling times I have ever had have been the verbal controversies in which some of the great Soviet masters, such as Eisenstein, Pudovkin and Dovzhenko have participated. In fact, quite often a producer will read his scenario to his colleagues and make mendations or augmentations according to their criticisms.

This frank criticism is also found in the Press reviews of films. There is no holding of punches or withholding of names. A spade is called a spade and no one tempers his criticism according to the reactions of big advertisers. This is a somewhat severe, yet healthy atmosphere for an artist, and something which is badly needed here.

COLOUR AND STEREOSCOPIC

The Soviet Cinema Research Institute has been working on colour film since about 1932. The first feature film which was made in colour was *Nightingale, Little Nightingale*, by Nikolai Ekk (director of the famous children's Film *The Road to Life*). This was a two-colour system which reached its finest expression in the full-length fairy tale film *The Little Hunchbacked Horse*, already mentioned. The colour specialists were very impressed by the superb use of the limited two-colour system and there is no doubt that if it had been in three-colour, it would have been hailed as a "world-shaking masterpiece."

Unfortunately, this colour development was hindered by the war, but, as I write, news has been received that the three-colour system is now in use and that a feature film

called *Ivan Nikulin—Russian Sailor* was being shot in colour last year. This is a film of the Black Sea naval detachment that fought on the Kuban Steppes. It is being directed by the Moscow director, Savchenko. As soon as a copy is available, it will be sent abroad and everybody is waiting with interest to see what the Russians can do in three colours.

Information is available to show that in the realm of stereoscopic film the Russians are ahead of the rest of the world, although, of course, patents which are as good may be lying hidden in the safes of big American concerns. The fact is that Moscow actually has a cinema for the projection of stereoscopic films. It involves no artificial eyes, such as red and green glasses, etc., and from those who have seen it I learn that the effect is awe-inspiring.

Semyon Ivanov, its inventor, is 35 years old, the son of a shoe-maker in a little central Asian village. Because of the dire poverty of his parents he took to the road while still very young, trekking from Central Asia to Siberia and back and earning his keep as shoemaker, farmhand, smith, mechanic, actor and artist.

His passion for art brought him to Moscow at the age of 17, and there he began to study at an art school, but he did not stay long. He was attracted at the time to Museum work. It was the dull, flat surface of the pictures displayed at the museum which first made him imagine the effect that stereoscopic photos would produce if presented in cinema form.

When film circles heard of his work he was at once supplied with everything necessary for his experiments. Producers, cameramen and engineers were assigned to help him.

THE FIRST ONES

The first stereoscopic films produced in Moscow shortly before the war were very successful. The effects amazed

the audiences. For the first time film fans saw birds that seemed to fly away from the screen nearly over their heads, saw crashing waves that threw liquid gems nearly into their laps.

In the main Ivanov's invention consists of a calibrated screen upon which two films, depicting the same scene from different angles, are simultaneously projected by the usual machines with an optical attachment. When the proper focus is found, both films merge into one and produce the effect of a three-dimensional picture. Much has been written about this stereoscopic screen composed of 36,000 very thin copper wires running in different directions in conformity with certain calculations. It takes about 112 miles of wire to make a screen of 25 square yards.

Ivanov has just presented his country with another innovation—the "integral" screen, a new development of his second discovery.

His remarkable inventions earned him a Stalin Prize. He also wears a military decoration. On the outbreak of the war he joined the People's Volunteer Force and found himself in Leningrad. Here he decided to put his knowledge of stereoscopies to use under front line conditions. He began to teach Soviet scouts to see the enemy with two eyes by using stereoscopic instruments.

At present Ivanov is working out methods for the mass production of his stereoscopic lens screens. Twenty stereoscopic cinemas are to be opened in various cities of the Soviet Union in the near future.

Thus a final demension is now added to the cinema and it is quite clear that after the war we shall have stereoscopic colour sound-films which should be the most potent weapon science has ever handed to art. And, as always, its value is not in itself, but in its use.

THE LANGUAGE PROBLEM

One of the negative aspects of the introduction of sound-films was, of course, the raising of the barrier of language, so that a play or story that hitherto put over in terms of mime or silent visual image is now partly imagery and partly dialogue and, in many cases, entirely dialogue. Thus, when we come to see films of another nation than our own, several difficulties arise. As far as we in this country are concerned, American production, which is the largest in the world, is made in the English language (or as near as dammit), so that England has not been faced with the problem which Europe had of finding that all except home-produced films are in foreign languages.

There are two basic methods of showing such films to ordinary audiences. Either they are sub-titled, or "dubbed." Subtitling involves in fact the concentrating of the dialogue into short sentences which are superimposed on the lower part of the screen. This means, naturally, that the spectator, not knowing the original language, loses a great deal of its finer points and misses a great deal of the visual side, because he spends most of his time reading the sub-titles. In a film with little dialogue it may not matter much, but in a film with a tremendous amount of dialogue (as for example, *Jacob Sverdlow*), the eyes are, unfortunately, most of the time on the changing sequence of sub-titles. This is how French films have so far been shown, for example, in this country, but, as they are only shown in specialised cinemas, it means that most of the people understand a good deal of the dialogue and only need the sub-titles to supplement what they miss. Which means, also that fewer sub-titles can be used.

But when it comes to Russian films quite clearly almost nobody in this country understands the dialogue or can even guess what it all means, and therefore many more

sub-titles have to be used. Added to this difficulty is the fact that generally speaking popular audiences dislike subtitled films. It may be that reading a title entails greater effort and is slower than listening to the same thing spoken. Obviously more effort is required and more imagination. And the fact that such audiences are not forced to subsist on a fare of foreign films means they have less chance of getting used to it.

The other method is that known as "dubbing" a film.

TO DUB OR NOT TO DUB?

This a very complicated process which, in the final result means that the original, say, Russian actors, now speak English or American.

The same problem arises as regards the audience's perception. British audiences are not used to dubbed films and one or two very popular French films so done before the war were a failure with commercial bookings. Here, however, new ground was covered by those of us who made the first dubbed version of a Russian film in English. So great was the interest in the Soviet Union that for the first time a dubbed foreign film had a wide popularity, e.g., the first Russian feature film to be dubbed was *In the Rear of the Enemy*, which has been shown in over 1,300 cinemas in Britain. So that despite a certain prejudice, it is clear that this is the only successful method of showing foreign films in England.

However, there is a great objection to this method artistically, because it involves the entire elimination of the original dialogue and the substitution of a foreign dialogue spoken by foreign actors so that the visual behaviour of a Russian actor has to be matched by the verbal behaviour of another actor. The whole secret is in this matching. Speaking from personal experience, I can say that it is one of the most difficult jobs that any producer has to tackle. How

to render, for example, a Russian peasant speaking English, or a Mongolian chief? Add to this the difficulties of totally different social and national backgrounds and the problem becomes almost insurmountable.

The experiment was made with another Russian film—*Russian Guerillas*—whereby one person interpreted line by line what the Russians were saying while they were still heard in the background. But this was very severely condemned by the critics. So that those of us who have to deal with these problems are in somewhat of a dilemma. The public don't like sub-titled films—certain critics don't like dubbed films. However, it is clear that failing the production of films simultaneously in several languages, dubbing appears to be the only solution. In two Soviet films—*Tanya* and *Volga-Volga*—dubbing has been carried a step further whereby songs as well as dialogue are now in English. This is the most complex form of dubbing possible, and it remains to be seen how successful it will be.

The Soviet Union itself has to face this problem because although 100 million of the 190 million population are Russians, there are 150 other languages, and although films are made in the national languages of the large Republics such as Armenia and Georgia, it would be impossible to make films specially in the languages of the smaller nationalities.

Therefore a special dubbing studio in Moscow simultaneously dubs a Russian film into ten of the major languages, and sub-titles them in the rest of the languages. Certain of the films produced by the national Republics are similarly dubbed into Russian.

Regarding the Soviet films in Great Britain, no doubt Soviet films being in another language and having to be dubbed in this country come up against "sales resistance," which does not apply to American films, but nevertheless, there appears to be not only "sales resistance" in certain

circles because of public habit, but also because of the prejudices of some private groups involved in cinema renting, distribution and exhibition.

WHAT OF THE FUTURE?

It is clear from the 1945 Film Plan which is appended to this pamphlet that a new trend is beginning in Soviet cinema. The grim "fight to the death" themes of the equally grim historical period of 1942-43 are now giving way to a more elated victorious theme. The grimness is still there, but is more in the background and individual conflicts are more to the foreground. At the same time, more films of lighter themes are being produced—musical comedies, operettas, etc.

With the return of temporarily evacuated film production to the big studios at Leningrad, Moscow and Kiev which has already taken place, there is no doubt that the standard of quality in all respects will improve and a higher output be achieved.

Another interesting wartime development is the wider showing of foreign films in Soviet cinemas, in particular, British and American productions.

A natural interest has developed in the life and art of the Soviet's Allies, and this has meant British films reaching Soviet screens for the first time. Among features shown are the following:—

In Which We Serve, which had a great success and a high artistic evaluation from the Soviet critics. *Proud Valley*, featuring Paul Robeson, who is well-known to Soviet audiences, plus the unusual subject matter for the average film—the life of ordinary workers, in this case, in mining. The singing of the Welsh Choir as well as that of Robeson added to its popularity in that all-singing country. George Formby scored a resounding success in *Let George Do It*.

He demonstrates once more that fundamental fact that the humour of the people is international.

Amongst the American films which have achieved a great success is *Mission to Moscow*, which, despite the obvious discrepancies that must exist in portraying living Soviet characters, yet because of its historic rendering and the fact that such rendering has never been done before, puts it in a special place in the Soviet Union.

Another film about the Soviet Union which is having a great success there is *North Star*. This is interesting to note. What it means in fact is that it proves to the rather sceptical Soviet public that foreign film studios can produce genuine sincere films about the Soviet Union, as well as the opposite such as they have produced in the past.

Lady Hamilton is also very popular, particularly for its lavish settings and its acting.

In the documentaries, such films as *Desert Victory* are of great interest, but the biggest impression in cinema circles was made by Frank Capra's *Battle for Russia*. Using exclusively Soviet film material, he has put together a film that is brilliant in its execution and the Soviet are not slow to recognise a master's touch.

There is no doubt that the Soviet public are eager to see more British, American and French films, and equally, no doubt, that the market is vast enough to take many more. Of course, with the Soviet Union distribution is simple. Once the State cinema organisation takes a film, its success depends solely on public popularity. Distribution facilities are automatic. There is no friction of any kind, or possibility of obstacles preventing the public getting even a *chance* to look at it, such as exists elsewhere. But, of course, these questions are linked up with the general problems of post-war planning and I have no doubt that as things are going now allied unity is growing stronger and stronger and the

Second Front should finally convince any doubter of its reality forged in the furnaces of war.

AUDIENCES

In conclusion a word must be said about the audiences in the Soviet Union. In general, there are two rules which apply to Soviet policy throughout the Arts. The first is that, in all the Arts, everything possible should be done to ensure that the world's great classics are made available to the whole Soviet people. The second is that, in producing his works of art, the Soviet artist should work for the whole people, and not for a small clique of intellectuals, connoisseurs, or personal admirers.

As a result of the application of the first principle, the standard of taste of the Soviet people is bound steadily to rise, as their familiarity with the classics raises the demand they make upon contemporary artists. As a result of the second principle, films are produced to suit the level of public taste and the demands of public interest as they are to-day.

There were 193,000,000 people in the U.S.S.R. before the Nazi invasion. Just under half of these were town or city dwellers, working in or connected with industry. The rest, a bare majority, were peasants, mainly enrolled in the collective farms. In 1917 the Soviet Union was a mainly peasant, mainly illiterate country; in 1939 it was mainly literate.

The audiences for whom Soviet films are produced are workers or peasants. Since there are still greater technical facilities for films in the towns than in the country, it would be true to say that, up to now, the majority of audiences have been town-dwellers. But with the development of village cinemas, mobile cinemas, out-of-door projectors and screens, and 16 mm. non-inflammable films, the rural audience has been steadily growing relatively to the urban audience. At the same time, as we have seen, the child

audience is specially catered for, and the children's films are mostly highly pleasing also to grown-ups.

The fact that the U.S.S.R. contains a large peasant population, and that the town populations have, in the past fifteen years, been rapidly augmented by migration from the villages, gives a certain peasant flavour to the Soviet audience even in the towns. Hence a fact which inevitably must impress a British audience—so accustomed to the tempo and dash of the American film—Soviet films tend to be slow-moving compared with American, and even compared with British.

But with the greater interchange resulting from our Alliance, the influence of American tempo on Soviet audiences is bound to affect the tempo of Soviet films also, alongside the more fundamental influence of industrialisation.

Since the Soviet producer must always bear in mind the vast extent of his audience, since his art is not hampered by commercial considerations, and since Soviet policy favours every tendency which brings actors and audiences closer together, we find that Soviet film producers, like their poets, authors and musicians, must keep an ear very close to the ground in their work. Any unreality of detail, concerning, say Red Army routine, the working of a railway depot, combine harvesting, or a workers' club will call down upon the guilty producer a positive hail of criticism, letters from the length and breadth of the U.S.S.R., telling him that "this is not good enough," it is not true to Soviet life.

As the Soviet public read more of the great world classics; as they see more of the world's great plays; as they have access to most of the world's greatest films outside their own; their taste, their demands on their own producers, are going steadily to become more exacting. It is this prospect, of an ever-growing audience, and of an ever more critical audience, that faces the Soviet film artists to-day. And,

because Soviet films are a public service and not a commercialised concern, they will contribute their share in the future as in the past to raising the standard of world cinematic art.

APPENDIX

PROGRAMME FOR 1945

The complete liberation of the U.S.S.R. has enabled the Soviet cinema considerably to extend its production plans for 1945. All studios evacuated to Central Asia early in the war have now returned to their home towns: Leningrad, Kiev, Odessa, Moscow and Minsk. All are busy producing new films. In addition to many full-length documentary and popular science films, Soviet studios will produce 47 feature films.

The 1945 plan has several categories. What is particularly noteworthy is the growing number of films produced by National Studios. A number of films will deal with various aspects of the war, one of the most interesting of which will undoubtedly be the Lenfilm production *Army General*, directed and based on the scenario by Boris Chirskov.

Mosfilm studios are completing their open air scenes of *Day and Night* in Stalingrad, directed by Alexander Stopler, and based on Konstantin Simonov's scenario on the defence of the great volga citadel. The main theme here is the friendship of the men and commanders of a Soviet unit defending its position in the face of furious Nazi onslaughts.

Director Mark Donskoy of Kiev studio is filming *The Unconquered* based on a story of the same title by Boris Gorbатов, about the Soviet people who continued the struggle against the invaders in occupied territory.

The Vasiliev brothers will film their own scenario of *Leningrad*, depicting the defence of that great city.

A number of films will show the war effort of Soviet people to supply the front. Such a film is the Lenfilm production *Storm* directed by Grigory Kozintsev and Leonid Trauberg, depicting the evacuation and reassembly of a Leningrad aviation plant in Central Asia.

At Kiev studios producer Leonid Lukov will film the second part of *Greater Life*, based on the scenario by Pavel Nilin, about the restoration of the Donbas ruined by the Germans.

Several films will depict the struggle of the Slav people against the occupationists. Among them there is *Yugoslavia*. Georgi Mdivanis wrote the scenario and it is being filmed by the Georgian director, Siko Dolidze.

Another is on *Poland*, the story of modern Poland filmed by Mikhail Romm.

An important category is that of historic-revolutionary films. Director Sergei Eisenstein has finished the first part of *Ivan the Terrible*. Sergei Yutkevich will direct the film *Dmitry Donskoy*, with Sergei Borodin's scenario about the outstanding Russian statesman and warrior of the 14th century, who routed the Tartar hordes on the banks of the Don.

Director Vsevolod Pudovkin has begun production of the film *Admiral Nakhimov*, the great Russian admiral of the 19th century.

There will be one on the *Battle of Grunewald*, scenario by Igor Lukovsky, to be filmed by director Vladimir Petrov, which shows how the Teutonic Knights were routed by the combined Slav forces of Russian, Byelorussian, Polish and Czech peoples at the beginning of the 15th century.

Of particular interest is the film *Fatelikhan Kubinsky*, to be produced at the Baku studios under the direction of A. Iskanderov and M. Mikayelov. This will show the progressive activities of Fatelikhan, who laid the foundation for the unity of the Azerbaidjan State in the 18th century.

Director Mokhail Chiaurelli in the Tbilisi Studios will film Peter Pavlenko's scenario *The Oath*, featuring the principal epochs in the history of the Soviet State, which will show how the Soviet people have fulfilled the oath sworn by Joseph Stalin at the grave of Lenin.

BIOGRAPHICAL

Several biographical films will include *Glinka*, the great Russian composer, scenario by Lev Annstam; *Abai*, directed by Grigori Roshal, about the Kazakh literary classic of the 19th century; *Song of David*, directed by Nikolai Samov and Joseph Tumanov, about David Guramishavili, the great Georgian poet of the 18th century; *Navoi* directed by Kamil Yarmotov, about the Uzbek poet and statesman.

Comedy and musical films will also increase in number.

Director Grigori Alexandrov has begun production of a comedy called *Screen Star*.

Semen Timoshenko will produce a film, *Winged Chariot*, about flyers of the Leningrad front.

Director Igor Savchenko recently completed his three-colour film called *Ivan Nikulin—A Russian Sailor*, and will continue to work on colour films. His next picture is to be a musical comedy entitled *Dowry*, based on old Russian vaudeville. Its action is laid in Moscow in 1813, when the victorious troops returned to the capital after Napoleon's defeat.

Director Protozanov, at the Yerivan studios, will work on the second part of his film *Khodzha Nasreddin* ("Adventures in Bukhara"), the story of the favourite Eastern hero and jester of the same name.

Directors Alexei Frolov and Boris Chirskov at the Mosfilm studios will direct the comedy *The Twelve Bridegrooms*. The story will take the form of a soldier's narrative, in which they will disclose the characters of their heroes, their ideals

in thought and in practice. The action begins before the war and concludes after the close of hostilities.

The Georgian director, Shalva Managadze will direct the film *Stubborn Neighbours*, about life in a modern Georgian village, the theme being that of Georgian peasants collecting money for the Defence Fund.

At the Alma-Ata Studios director Dmitry Tarasov will direct the film *The Happy Sergeant*, about young folk returning to their homes after the war.

1945 will also see the filming of a number of classics, among them *Guilty Though Guiltless*, based on a play of the same name by the Russian classic dramatist, Alexander Ostrovsky. This will be directed by the director Vladimir Petrov, famous for his historic film *Kutuzov*.

Director Alexander Andrievsky will direct the stereoscopic film *Robinson Crusoe*, and director Vladimir Braun will screen several sea stories of Stenyukovich in the film called *Deep Sea Sailing*.

The children's studios "Soyuzdetfilm," will produce several pictures about Soviet youngsters during the war, their participation in the job of restoring cities and villages ruined by the Germans, rearing the new generation and the young people's devotion to the country. For small children there will be screen versions of Russian folk tales.

MUSIC EDUCATION

GENERAL PICTURE

MUSIC Education in the Soviet Union is given through the medium of a well-developed network of musical institutions.

A music school of a general type with a seven-year course is the first link in the chain of specialised musical institutions. Next come secondary music schools with a four-year course. Then there are music schools of a higher type in large towns for children with outstanding gifts. These schools have an eleven-year course consisting of one preparatory and ten basic classes. Finally, there are State Conservatoires which represent the last stage of the system of music education in the Soviet Union.

The table on page 214 serves to illustrate the number of music schools, secondary music schools and Conservatoires and their distribution among the different constituent Republics.

As the table shows there were in all 68,519 students in musical institutions according to the data for August 1945. Over a half of this number, namely 34,500, or 54 per cent. of the students, come from Republics other than Russia (R.S.F.S.R.). There are 15,500 students in the Ukraine, Moldavia and Byelorussia, over 11,000 students in the Transcaucasian Republics, 4,500 students in the Central Asian Republics and over 3,000 students in the Baltic Republics.

Music education has spread even to the remotest regions of the country. Music schools of different degrees are to be found, for instance, in Vladivostok, Yakutsk, Syktyvkar (Komi region, N.W. of the Urals), Ulan-Ude (Buryat-Mongolia) and elsewhere.

The war caused enormous damage to the music education system of the Soviet Union. A large number of

buildings, in which musical institutions were housed, was destroyed in regions ravaged by the war, and their most valuable equipment and accessories were destroyed by fire. Unique valuable scores, pianos and harps were carried away from Conservatoires and secondary music schools situated in regions occupied by the Germans.

Now the number of musical institutions in the Soviet Union has again reached pre-war level. A number of new music schools and secondary music schools were opened in various parts of the country during the war years and in the few months that have followed the end of hostilities.

Three higher musical institutions—a conservatoire in Vilna, the capital of the Lithuanian S.S.R., a Conservatoire in Alma-Ata, the capital of Kazakhstan, and the Gnesin Musical Pedagogical Institute in Moscow—were opened in the autumn of 1944. A Conservatoire in Kazan, the capital of the Tatar Republic, was opened in the autumn of 1945. In the year 1945-46 it is intended to open 15 music schools for children in the B.S.F.S.R. alone.

There is, as yet, a lack of teachers of a number of specialised subjects in certain musical institutions and particularly in those situated in frontier regions. Certain schools are crowded and this makes the work more difficult. There are sometimes not enough instruments and school accessories even in large cultural centres. These difficulties are being dealt with most vigorously and a great deal of attention is devoted to overcoming them.

Musical institutions in regions liberated from German occupation get special assistance from the central regions of the country. The Moscow Conservatoire, for instance, sent nearly a hundred thousand copies of music to the Conservatoires and music schools of Kharkov, Kiev, Odessa, Minsk, Riga and Tallinn.

The fundamental principle of music education in the Soviet Union, as of education in general, is that educational

institutions are accessible to everyone who wishes to study and has the necessary aptitude, and that the student is provided with all the material conditions that his studies normally require. Every gifted boy and girl has free access not only to participation in amateur societies, but also to specialised secondary and higher musical training and education.

Different stages of the system of music education are linked with each other. The most gifted pupils who pass out from music school continue their studies at secondary music schools. The most promising of these students then go in their turn to Conservatoires.

Education in music schools is not free of charge, except for service men, war invalids and their children. But the fees for children in music schools are strictly differentiated according to the incomes of their parents—the monthly fee for those of the lowest income group does not exceed eight roubles.

Students' fees in secondary music schools and Conservatoires are covered by a system of scholarships. All students, except those whose studies are not successful, get a State scholarship which is paid to them monthly. Ordinary State scholarships given to students at secondary music schools provide them with sums ranging from 80 to 140 roubles a month, and from 140 to 210 roubles for Conservatoire students. The State scholarship varies within these limits according to the degree of success achieved by a given student, and it is lower in junior than in senior classes.

The most brilliant students at higher schools are granted Stalin scholarships, which were introduced in 1939 to mark the occasion of J. V. Stalin's 60th birthday. These scholarships, which amount to 500 roubles per month, exist at the Moscow, Leningrad and Kiev Conservatoires.

Students who come to secondary music schools and Conservatoires from other towns or localities, apart from getting

NETWORK OF EDUCATIONAL MUSICAL INSTITUTIONS IN THE SOVIET UNION

Republics	Music schools		Music schools		Higher type		Conservatoires		Total number of students
	Elementary	Students	Numb.	Stand.	Numb.	Specialist	Numb.	Stand.	
R.S.F.S.R.	...	182	20,488	48	6,060	3	986	5	1,579
Ukraine	...	62	11,200	12	1,571	4	734	4	786
Byelorussia	...	7	600	3	148	—	—	1	115
Moldavia	...	2	66	—	—	1	198	1	45
Transcaucasia :									
Georgia	...	20	4,254	7	1,128	1	263	1	279
Armenia	...	4	1,597	2	458	1	273	1	138
Azerbaijan	...	11	1,557	3	571	1	504	1	186
Central Asia :									
Kazakhstan	...	7	866	2	227	—	—	1	110
Turkmenia	...	8	1,071	1	77	—	—	—	—
Uzbekistan	...	9	1,350	1	106	1	247	1	135
Tadjikistan	...	1	201	1	19	—	—	—	—
Kirghizia	...	1	76	1	71	—	—	—	—
Baltic Rep. :									
Estonia	...	3	232	—	—	2	515	1	70
Latvia	...	5	570	6	93	1	62	1	92
Lithuania	...	2	150	2	754	—	—	2	480
TOTALS									
for the Soviet Union :	321	44,338	89	11,383	15	3,782	20	4,016	63,519

the State scholarships, are accommodated in hostels. Those of the Moscow Conservatoire accommodate 150 students. The hostels are well furnished and are provided with wireless sets and musical instruments.

Those who study in educational institutions in the Soviet Union, including Conservatoire students, get increased rations, similar to those issued to industrial workers, as well as priority in certain manufactured articles.

CHILDREN'S MUSIC SCHOOLS

The Children's Music is the basis of the system of music education in the Soviet Union. As pupils of Children's Music Schools also go to ordinary schools, musical studies are planned so as to combine them with those of the ordinary secondary school timetable.

All musically gifted children can be admitted to a Children's Music School. Every candidate on admission, has to pass a test to find out whether he has a musical ear, musical memory and a good sense of rhythm. The instruments which figure in the programme of these Music Schools are the piano, string instruments, such as violin, viola, cello, double-bass and harp, wind and brass instruments, percussion and popular musical instruments. The length of study varies according to different instruments.

The study of such instruments as the violin and the piano lasts seven years, that of viola, cello and harp—five years, while that of double-bass, wind, brass, percussion and popular instruments—three years.

The Children's Music School aims not only at teaching children to play a given instrument, but also at developing in them love, understanding and appreciation of music and at familiarising them with musical culture. All the work at school is influenced by this guiding idea. That is the reason why, besides special musical subjects, an important

place in the Children's Music School curriculum is devoted to music literature.

All pupils, except of course pianists, have to study piano in addition to their special instruments and attend the orchestral class. Playing in orchestras develops in children the sense of ensemble and discipline, and widens their musical outlook. Certain Children's Music Schools have not only string, but also symphony orchestras.

Every pupil has to take part in a non-public concert not less than once every six months and to play a work chosen by his teacher.

The following table shows how various musical subjects are distributed in the curricula of different specialities:

Subjects	Double-bass Wind and brass Percussion and Popular instr.							
	Pianists		Violinists		Viola, Cello, Harp		3-yr. course	
	7-yr. course		7-yr. course		5-yr. course		3-yr. course	
	No. of hours	Years	No. of hours	Years	No. of hours	Years	No. of hours	Years
Speciality ...	470	I-VII	470	I-VII	340	I-V	110	I-III
Choral class ...	140	II-V	140	II-V	70	I-II	70	I-II
Orchestral class ...	—	—	270	IV-VII	200	III-V	70	III
Obligatory piano ...	—	—	100	II-VII	70	II-V	50	I-III
Solfa ...	370	I-VII	370	I-VII	270	I-V	170	I-III
Elementary theory								
of Music ...	70	V-VI	70	V-VI	70	IV-V	70	II-III
Musical literature ...	100	V-VII	100	V-VII	100	III-V	100	I-III
Total No. of hrs	1150		1520		1120		640	

Naturally, not everyone who graduates from a Children's Music School becomes a professional musician. But the musical knowledge and training every pupil acquires at school serve in his later life as one of the bases of his general culture.

SPECIALLY TALENTED CHILDREN

Music schools of a higher type, for children with gifts above the average, function at Conservatoires in 15 of the

largest towns of the Soviet Union. Studies in this type of "schools for talented children" last 11 years (one preparatory and ten basic years). The programme of such schools is divided into four specialities, namely piano, violin, cello and harp.

Pupils admitted to this type of school do not attend ordinary schools. The curriculum of such higher music schools includes general education subjects occupying from 5 to 24 hours a week according to different classes. Among other general education subjects special attention is devoted to the Russian language and literature, as well as to history. Mathematics and natural sciences are given in a somewhat more concise form than in the general secondary schools. On the other hand more attention is devoted to drawing and to the study of a foreign language (mainly English) which begins in the preparatory year and continues right through the school course. As in the case of general schools, gymnastics and physical training are taught regularly in all classes.

In addition to the subjects of a general musical type taught at Children's Music Schools, the curriculum of the higher music schools contains additional subjects, such as rhythm (from the preparatory year to the third), harmony (from the sixth to the eighth), analysis of musical forms (ninth to tenth year) and chamber music (from the sixth to the tenth inclusive). Apart from this, those who wish can learn a second foreign language from the fourth year and history of pictorial arts from the tenth year.

THREE FAMOUS CHILDREN'S SCHOOLS

Among these specialist music schools we should mention the Central Children's Music School, the Moscow Choral School and the Stolyarsky School in Odessa.

The Central Children's School began with a group of 15-20 exceptionally gifted children at the Moscow Con-

servatoire in 1932 and has now almost 500 pupils. Over half of these are pianists and the remainder can be divided into two groups: those studying strings (violin, viola, cello and double-bass) and those studying wind and brass (flute, oboe, clarinet and horn).

The Central Children's Music School is directed by Professor V. Shirinsky. This outstanding musician is a violinist and composer and plays in the well-known Beethoven Quartet. The composer, Professor Vissarion Shiebalin, director of the Moscow Conservatoire, is in charge of the musical direction of the school.

Lessons are given by outstanding Moscow professors such as the pianists Alexander Goldenveiser and Heinrich Neuhaus, the violinists Abram and Mark Yampolsky and Galina Barinova, and the cellist Alexander Vlasov.

This school has produced such fine artists as the pianist Rosa Tamarkina, and the violinists Marina Kozolupova and Boris Goldstein.

The lowest age of admission into this school is six or seven years. There are nearly 100 pupils of that age at the school. The work with such young children mainly takes the form of musical games. Among the pupils are children of various nationalities, Russians, Ukrainians, Armenians, Georgians, Tatars and Kalmuks.

Every one of them has his own interests, his own longings which the professors encourage and develop. Many of the children continue the musical traditions of their families.

In one of the class-rooms of the large school building which stands not far away from the Moscow Conservatoire, we can listen to the majestic sounds of a Bach sonata. Sixteen-year-old Olga Dulova, daughter of one of the best Russian violinists and professors, Georgi Dulov, is playing with great enthusiasm the Second Solo Sonata by Bach. Her professor Lev Tseytlin listens attentively to her interpretation. He makes a few remarks and the young violinist

passes to Beethoven's Concerto. This is followed by some pieces by Tchaikovsky and the Minuet from Debussy's "Petite Suite."

But at home Olga has not only to prepare all this repertoire, but also do her geometry and algebra homework, read a large number of books suggested by her literature teachers, and practise the piano a little. Tchaikovsky, whose works, by the way, have recently been published in a fine new edition, is Olga's favourite composer and a place of honour is reserved for his bust on her desk.

Her fellow student, violinist Dmitri Shebalin, is a pupil of the eighth year at the same school. He is the son of the well-known composer Shebalin who directs the Moscow Conservatoire and who is music director of the Central Children's Music School.

Dmitri works very hard. He knows that at home his father will ask him about his day's impressions, about new works he has seen in the class and perhaps will show him his new compositions. Of course Dmitri, too, would like to be a composer and so would many of his school friends. Some of them have already begun to compose, as for instance the 12-year-old Alla Pakhmutova, who has written a Sonatina in three movements for piano, and the fourteen-year-old Nikolai Karetnikov, who, inspired by Shakespeare's tragedy, wrote music to a number of scenes from Hamlet and called his composition "Ophelia."

Children take part in the chorus and orchestra soon after entering music school life. The school has an excellent choir and a string orchestra which performed a "Concerto Grosso" by Handel, at one of the school's public concerts.

Education at this school is free of charge. All the pupils get the same rations as workers. Starting from the fifth year the pupils are given State scholarships.

The Soviet Government is devoting much attention to the Central Children's Music school, the "nursery of tal-

ents." Large sums were allocated during the war years for a general reconstruction of the school building. Now the school is housed in an excellent, bright, four-storey building in which there is a concert hall holding 400, a library, reading-room, a canteen and large class-rooms with double doors and soundproof walls.

The Moscow Choral School is also a higher type music school. It trains children who are going to be singers, chorus masters and vocalist teachers. Alexander Sveshnikov, an outstanding authority on choral singing, is the founder, the director and the music director of this school.

Boys of 7-9 years of age with outstanding musical gifts and good voices are admitted to this school. Children pass an admission test, the purpose of which is to establish whether they have a musical ear, a sense of rhythm and musical memory. It tests their vocal potentialities as well as the state of their vocal apparatus. The selection is made on very strict lines. From two thousand boys who underwent the test last year only 32 were admitted!

In order to get the largest number of boys with suitable musical and vocal qualities the school sends special expeditions to various places. Recently, representatives of the school went to the Ukraine and to the Volga region to find musically and vocally gifted children. This reminds one of how Glinka went to the Ukraine to look for singers for the choir he conducted.

The school has a ten-year course. The school curriculum contains general educational subjects to the full extent of a secondary school programme, as well as special subjects including a thorough study of polyphony and musical analysis. Great importance is also attached to an acquaintance with music literature.

The repertoire for training these singers consists mainly of Russian and other folk-songs, of masterpieces by such great Russian composers as Glinka, Borodin, Tchaikovsky,

Taneev and by such Western writers as Palestrina, Orlando di Lasso, Bach, Handel and Haydn.

The Moscow Choral School is the only musical institution in the Soviet Union where pupils can live in and are provided free of charge with full maintenance and clothing.

The Stolyarsky School in Odessa enjoys a world-wide reputation. The school has produced many excellent violinists, among whom have been international prize-winners such as David Oistrakh, Lisa Gilels, Boris Goldstein, Mikhail Fikhtengolts and many others.

Peter Stolyarsky, the famous violin professor and founder of the school, died in 1944.

When the Germans were retreating from Odessa they blew up the Stolyarsky School building which had been one of the finest in the town. At present this building is being reconstructed, but for the time being the work of the school is carried on in a new one. How great is the desire among young violinists to study at this famous school can be gathered from the fact that applications for admission in autumn, 1944, exceeded, by seven to eight times, the number of available vacancies.

SECONDARY MUSIC SCHOOLS

The Secondary Music School is the link between the Children's Music School and the Conservatoire. The length of study in such a school is four years.

Secondary Music Schools train teachers for Children's Music Schools, piano accompanists, orchestral players, choristers and conductors for choral societies and ensembles. There are the following seven special sections at a secondary music school: (1) piano, (2) vocal, (3) string orchestras, (4) wind, brass and percussion instruments, (5) popular instruments, (6) orchestral conductors and chorus-masters and (7) art of conducting and composition.

Age of admission to a Secondary Music School ranges from 15 (in the case of vocalists, from 18) to 30 years, provided that the student has good musical qualifications and an education standard equal to seven years of general education. On admission every candidate has to sit for an examination in his special subject and in music theory.

As one of the aims of a Secondary Music School is to train music teachers, the curricula of all sections of the school course include, in the third and fourth years, a special subject called "methods of teaching music."

An important part of the Secondary Music School curriculum is devoted to theoretical and historical music subjects.

All students of a Secondary Music School, except pianists, have to attend the choral class and study the piano.

Accompanying, teaching and conducting occupy an important place in the programme of senior classes.

The Secondary Music School programme for pianists includes, besides individual piano work, a class of piano ensemble.

Singers, besides studying solo singing and working with a leader of an orchestra, also study rhythm, dance, the Italian language, vocal ensemble and acting. In the fourth year all singers must attend the opera class.

Opera classes are of a very high standard. The most popular works in their repertoires are "Eugene Onegin" and "The Queen of Spades," by Tchaikovsky, "Marriage of Figaro," by Mozart, "Barber of Seville," by Rossini, and "Faust" by Gounod.

The curricula of classes for string instruments include an orchestral class from the second year, a class of chamber music from the third and a quartet class in the fourth year.

The class for orchestral conductors and chorus masters contains the following subjects: solo singing, the technique

of conducting, work with choirs and the reading of choral scores.

The successes achieved by the best students of secondary and other music schools are demonstrated in public performances. The programmes of such concerts seldom consist of traditional works of a purely pedagogical interest. They usually include Russian and Western classics as well as the finest works by Soviet composers. Experience has shown that such programmes provide excellent material both for improving the musical technique of a young musician and for developing his artistic tastes.

To mark the 50th anniversary of the death of the composer Anton Rubinstein, the Secondary Music School at Makhach-Kalla in Dagestan organised a concert consisting entirely of his works. Then the programme of the public concert organised by the Secondary Music School at Ashkhabad in Turkmenia consisted of works by Rimsky-Korsakov, Rachmaninov and Delibes.

Over 100 young musicians, including several seven-year-old children, took part in seven special public concerts organised by the Secondary Music School in Moscow. The symphony orchestra, consisting of pupils of the school per a Vivaldi Concerto in unison and cellists, also in unison, with organ accompaniment, played an aria by Purcell.

Musical institutions from time to time organise joint Republic or Town Festival concerts. Almost 500 participants took part in such a concert held in Moscow in the spring of 1945; among others there were nine orchestras and six choral ensembles.

Such concerts provide an occasion for discussing pupils' performances, of analysing and estimating the work of teachers and of selecting the best pupils who are to take part in the final performance. Scientific-pedagogical conferences are held simultaneously with these concerts. They examine and adopt the experience of the best schools and

teachers and also discuss and settle problems connected with methods of teaching.

* * *

Among other Secondary Music Schools in the Soviet Union the Glazunov Secondary School of Music and Drama in Moscow deserves special mention. It is the only institution in the Soviet Union which trains artists for musical comedy and operetta. This school has recently celebrated its 25th anniversary. It has trained almost 500 artists, the majority of whom work in theatres.

The Glazunov Secondary School of Music and Drama has a five-year course. Studies there take one year more than in secondary music schools of the general type.

It has a curriculum of its own which is in certain respects different from that introduced in other schools. Besides subjects taught in all secondary music schools it contains a number of subjects which its special purpose requires. These are history of Russian and West-European theatres, history of musical comedy, and a number of subjects dealing with theatre technique. Much attention is devoted to the latter, which includes the art of acting, the technique of speech, make-up and fencing.

The curriculum also includes subjects of a general educational character, such as Russian and Western literature and a foreign language.

STATE CONSERVATOIRES

State Conservatoires conclude the system of music education institutions of the Soviet Union.

Conservatoires have a five-year course which aims at producing highly qualified specialists in all spheres of musical art, concert performers, soloists, opera singers, composers, conductors, specialists in the science of music (both theory and history of music), and finally professors on spe-

cialised subjects for secondary and higher music education institutions.

Conservatoires have the following faculties: (1) piano-organ, (2) strings, (3) wind and brass instruments, (4) vocal, (5) orchestra and choir conductors, (6) composition, (7) history and theory. In addition to these, there is at the Lenin-grad Conservatoire a section which trains opera producers and at the Sverdlovsk Conservatoire, a section for training artists for musical comedy and operetta.

In autumn 1944, the Moscow Conservatoire introduced a section for symphonic conducting and a section on electrical instruments. This latter class deals not only with teaching the new Soviet-invented electrical instruments, such as the Gurov "violena," the Rimsky-Korsakov and Ivanov "emiriton" and the Volodin "equodin," but also with research work for further improvements of electrical instruments.

Soviet citizens of either sex, between 17 and 30 years of age, having special qualifications of a secondary music school standard and of a general secondary school education can be admitted to a Conservatoire. All those who apply for admission have to pass an examination in their speciality, theoretical musical subjects, history of music and music literature.

The desire of Soviet youth to get higher musical education is very great and the number of applications for admission into Conservatoires greatly exceeds that of vacancies.

Many of the Conservatoire students come from the national Republics and remote regions of the country. Several ex-service men, who fought in the war, have now been admitted. Several former partisans are studying at the Kiev Conservatoire.

Professors of the Moscow Conservatoire, while visiting military hospitals, selected 40 musically gifted young men from the patients. They had served as airmen, tankmen,

infantrymen and in submarines. Some of them went to the secondary music school attached to the Moscow Conservatoire, others to the Conservatoire itself. They include singers, pianists, violinists, wind-instrument players, a composer and a conductor.

CURRICULA

In the main the Conservatoire curriculum is divided into four sections: social, specialist, historical-theoretical and general education.

The purpose of the social section, which is obligatory for all students, is to raise the ideological level of students and to help them to assimilate the guiding principles and methods of sociology and laws of development of society.

The curriculum of the special sections, in the case of students of the piano-organ, string and wind faculties consists of the following subjects:—

SPECIALIST FACULTY

Special Study	... 1st—5th year	... 400 hours
Choral Class	... 1st and 2nd year	... 140 hours
Chamber Music	... 3rd—5th year	... 120 hours
Musical Pedagogy	... 2nd—5th year	... 150 hours

Additional Work

PIANISTS

Accompaniment	... 2nd—5th year	... 140 hours
History & theory of Piano	... 2nd year	... 100 hours

STRING AND WIND INSTRUMENT PLAYERS

Quartet class	... 2nd—5th year	... 170 hours
Orchestral class	... 2nd—5th year	... 600 hours

The course on history and art of the piano is a characteristic feature of the programme of Soviet Conservatoires.

The purpose of this course is to review the history of playing and teaching the piano in connection with the evolution of piano literature. It gives, in detail, the main trends of piano art in the past and present. Much use is made, in this course, of gramophone records to illustrate the best examples of piano playing. There is a special broadcasting studio at the Moscow Conservatoire from which such demonstrations can be relayed simultaneously to several class-rooms.

Much attention is devoted to the work of violinists, violists and cellists in the quartet class. The curriculum of the class is based on the wise assumption that the production of a highly-qualified string player is impossible without a close study of the rich quartet literature, so exceptionally valuable from both a technical and artistic point of view.

No less attention is devoted to the orchestral class where students become acquainted with the best examples of symphonic and operatic music. These studies enrich the musical outlook of the students and develop in them an artistic approach to orchestral playing.

The main special subjects in the vocal faculty are:—

VOCAL FACULTY

Solo singing	... 1st—5th years	... 520 hours
Coaching	... 1st—5th years	... 400 hours
Piano class	... 1st—5th years	... 280 hours
Choral class	... 2nd and 3rd years	... 140 hours
Musical and Vocal teaching	... 3rd—5th years	... 90 hours
OPERA TRAINING	1st—5th year	
(a) Acting	... 1 year	... 200 hours
(b) Dance	... 2nd and 3rd years	... 140 hours
(c) Coaching	... 2nd—5th years	... 140 hours
(d) Make-up	... 4th year	... 70 hours
(e) Opera class	... 2nd and 3rd years	... 340 hours
(f) Opera studio	... 4th and 5th years	... 540 hours

The Conservatoire opera studio are real artistic cores of vocal and stage art. Public concerts given recently by the opera studios reached a very high artistic standard. The opera studio at the Tashkent Conservatoire gave "Pagliacci" by Leoncavallo; the opera studio at the Tbilisi Conservatoire gave fragments of the opera "Daisi" by Paliashvili (the classic of Georgian music), "The Queen of Spades" by Tchaikovsky, "The Barber of Seville" by Rossini and "Traviata" by Verdi; the opera studio at the Leningrad Conservatoire performed the opera "Iolanta" by Tchaikovsky and the opera studio at the Moscow Conservatoire gave "Eugene Onegin" by Tchaikovsky and "La Bohème" by Puccini.

The curricula of the orchestral and choir conductors, the composition and the historical-theoretical faculties consist of the following subjects:

<i>Subjects</i>	<i>Years</i>	<i>Number of hours</i>
ORCHESTRAL AND CHOIR CONDUCTORS FACULTY		
Choral class	1.5	1,020
Conducting	1.5	340
Study of choir	2.3	70
Reading of scores	1.3	50
Solo singing	1.3	50
Pedagogy and methods of teaching	2.5	240
Study of musical folk-lore and foreign literature	1.4	270
Piano	1.5	190
COMPOSITION FACULTY		
Composition	1.5	400
Study of instruments & orchestration	1.4	160
Reading of scores	2.3	80
Piano	1.5	190
Choral class	1.2	140
HISTORICAL-THEORETICAL FACULTY		
History of music—Russian	1.4	880
—Soviet		45
—Universal		840

Musical folk-lore	...	...	4	70
History of Aesthetics	...	...	4-5	70
Solfa	...	...	1	70
Harmony	...	...	1-2	100
Polyphony	...	...	2-4	100
Analysis of musical works	...	...	2-3	140
Study of instruments and analysis of scores	...	...	2-3	120
Pedagogy and methods of teaching	...	...	3-4	140
Piano	...	...	1-4	150
Choral class	...	...	1-2	140

The knowledge that a Conservatoire student acquires by studying subjects included in the special curriculum is deepened and enlarged by studies of subjects that form part of the programme of the historical-theoretical faculty. It contains subjects which are obligatory for all students: history of Russian music (160 hours), history of universal music (140 hours), harmony, solfa and analysis of musical works. In addition the pianists study instrumentation, the chorus masters and composers—polyphony, and the vocalists—rhythm.

Finally the general education curriculum includes the study of a foreign language which may be English, French or German. Singers also take a short course on the Italian language. Physical training is obligatory for all Conservatoire students.

History of pictorial arts and history of drama are taken as facultative subjects.

As has already been stated above, a new five-year course of symphonic conducting was introduced at the Moscow Conservatoire in the 1944-45 year. Students having the necessary qualifications can be admitted to this section from the third year of the piano, string, orchestral and choir conductors or the theory-composition faculty. The curriculum of the section for symphonic conducting consists of the following subjects:—

SYMPHONIC CONDUCTING FACULTY

Conducting in a class-room	...	...	270 hours
Conducting of an orchestra	...	...	125 hours
Reading of scores	...	...	140 hours
Instrumentation	...	...	70 hours
Attendance at rehearsals of symphony orchestras	...	...	610 hours
Assistant work in opera studio	...	...	320 hours
Study of musical literature	...	...	270 hours
History of aesthetics and pictorial arts	...	...	210 hours

The nature of the curricula is determined by the general principle pursued by all Soviet State Conservatoires, namely to bring up not only highly qualified specialists and brilliant players, but also to train fully educated musicians with a wide artistic and cultural outlook.

The methods of teaching used in the Conservatoires are also influenced by the same tendency.

A strictly individual approach to every single student, a consideration of the idiosyncrasies of the artistic personality of every student, of his gifts and capabilities and of the standard of his general and musical culture constitute one of the main and most characteristic principles on which the Conservatoire methods of teaching are based.

Most serious attention is devoted to the practical studies of the student. Students play as soloists and otherwise, not only in non-public academic performances, but also in public concerts of various types given by Conservatoires. The Moscow Conservatoire, for instance, organised during the 1944-45 term 184 student concerts, including a number of public symphonic concerts which, to mark the 50th anniversary of the death of Anton Rubinstein, consisted of works by this composer, as well as of works by Skryabin and Rachmaninov. In order to encourage first-class artists a number of competitions have been organised for the finest interpretation of works by Skryabin, Taneev and by Soviet composers.

Students can play in paid public concerts only by permission of their respective professors and provided that it does not interfere with their regular work.

Students, who intend to become teachers, train in teaching children both in Conservatoires and in music schools. Students of the composition faculty have to take part, as a part of their obligatory practical work in expeditions sent to collect and write down material of the musical folk-lore of the Soviet Union.

STUDENTS' REPERTOIRE

The repertoire studied in Conservatories is selected so that students become acquainted with all the main phases of the musical art of the world and assimilate characteristic features of the most varied artistic styles. Much attention is devoted to folk-music, folk-songs and instrumental pieces created by the Russian, Ukrainian, Byelorussian, Georgian, Armenian and other peoples, as well as to works which reflect it.

A close and thorough study is made of Russian classical works, so deep in content and rich in material; e.g., works by Glinka, Dargomyzhsky, Serov, Rubinstein, Tchaikovsky, Rimsky-Korsakov, Musorgsky, Borodin, Balakirev, Taneev, Glazunov, Lyadov, Rachmaninov, Skryabin, Grechaninov, Ippolitov-Ivanov and Stravinsky.

An important place in the Conservatoire repertoires is devoted to the best works by Soviet composers such as Glier, Vasilenko, Myaskovsky, Prokofiev, Shostakovich, Shaporin, Shebalin, Khachaturian, Kabalevsky, Alexandrov, Khrennikov, Koval, Dzerzhinsky, Lyatoshinsky (Ukraine), Paliashvili (Georgia), Gadzhibekov (Azerbaijan), Spendiaryov (Armenia) and others.

Finally, a place of honour in the repertoire is given to the centuries-old musical culture of Western Europe, to

masterpieces by her greatest composers such as Bach, Handel, Purcell, Gluck, Rameau, Gretry, Mozart, Beethoven, Weber, Schubert, Mendelssohn, Schuman, Liszt, Wagner, Brahms, Bizet, Saint-Saens, Auber, Delibes, Massenet, Thomas, Cesar Franck, Ravel, Debussy, Chopin, Moniusko, Dvorak, Grieg, Cimarosa, Bellini, Donizetti, Rossini, Verdi, Puccini and Elgar.

Four hundred and forty musicians who reached a high standard in advanced musical education graduated from the Conservatoires of the Soviet Union in 1945. They include 140 pianists, 120 singers, 80 orchestral players, 40 chorus masters, and 60 composers, historians and theorists. Prominent among them is a number of very gifted young men and girls among the students from the national Republics.

NATIONAL STUDIOS

The Soviet Government devotes special attention to the training of musicians in the different national Republics. There are Conservatoires in Kiev (Ukraine), Minsk (Byelorussia), Tbilisi (Georgia), in Erevan (Armenia), in Baku (Azerbaijan), in Kishinev (Moldavia), in Alma-ata (Kazakhstan), in Tashkent (Uzbekistan).

In addition there are national studios at several Russian Conservatoires which train singers for national operas, as well as composers and chorus masters. There is an Uzbek studio at the Leningrad Conservatoire, and a North-Ossetic, a Bashkirian and a Tatar studio at the Moscow Conservatoire, a Bashkirian, a Buryat-Mongolian and a Yakut studio at the Sverdlovsk Conservatoire and a Chuvash and a Mordvinian studio at the Saratov Conservatoire.

One of the tasks of a Conservatoire consists in training professors and teachers, as well as scientific cadres for higher musical education institutions. Students who suc-

cessfully graduate from a Conservatoire, and who have shown a disposition towards pedagogical or scientific research work, are retained at the Conservatoire as post-graduate students, which enables them to prepare themselves for the degree of Candidate of Art (similar to the English *degrée*, Master of Arts). The post-graduate course of study takes three years. Every post-graduate student is supervised by a professor, and each one is granted a State scholarship.

CONCERTS AT THE CONSERVATOIRES

First-class artists, who are professors at Conservatoires, give concerts and recitals in the concert halls of the Conservatoires. For instance the composers Dmitri Shostakovich, Sergei Vasilenko and Reingold Glier, the pianists Alexander Goldenveiser, Konstantin Igumnov, Vladimir Sofronitsky, Heinrich Neuhaus and Samuel Feinberg, the organist Alexander Gedike, the violinist David Oistrakla and cellist Svyatoslav Knushevitsky give concerts in the concert hall at the Moscow Conservatoire; composer Maximilian Steinberg, pianists Alexander Kamensky, Pavel Serebryakov, and Nadezhda Golubovskaya and cellist Alexander Shtrimer play in the concert hall at Leningrad.

Conservatoire professors and students are closely connected with the musical education of Red Army men and sailors of the Red Fleet—the Leningrad Conservatoire alone, using only its own artists, gave over three thousand concerts to soldiers and to military hospitals during its three years of evacuation in Tashkent, while concert brigades consisting of students and professors gave some 4,800 concerts for the forces, about two thousand of these being given at the front.

The Moscow and the Leningrad Conservatoires are particularly well known for their high standard of teaching and

performance. The Moscow Conservatoire has produced such great masters as Taneev, Skryabin, Rachmaninov, Glier and Shebalin, while Tchaikovsky, Glazunov, Laydov, Arensky, Prokofiev, Myaskovsky and Shostakovich made their studies at the Leningrad Conservatoire.

RESEARCH WORK

Important work is also done in the sphere of scientific research in music. Soviet Conservatoires are homes of various musical-scientific groups, one of which deals with the study of the problems of musical culture, in another the graduates prepare their theses for taking the degrees of Candidates or Doctors of Art, while yet another plans the scientific works, text books and other material necessary for a modern science of music in the various subjects studied.

An intensive study of the rich folk-lore and folk-music of the numerous peoples that inhabit the Soviet Union is now going on. The work of the folk-music groups at the Moscow Conservatoire, headed by Kilment Kvitka, and that at the Erevan Conservatoire, headed by Aram Kocharyan, has been particularly successful.

Each year the folk-music group at the Moscow Conservatoire study folk-songs and instrumental folk-music. During the latest expedition, which was sent to the Krasnoyarsk region in Siberia in the autumn of 1944, almost 500 old folk-songs were recorded. The folk-music group at the Erevan Conservatoire recorded in one year alone over one thousand popular instrumental Armenian melodies and folk-songs of epic, ritual, lyrical and humorous character.

The Conservatoires organise many scientific sessions at which professors and teachers read papers. In autumn 1945 an important session dedicated to Rachmaninov's

life and works was held at the Moscow Conservatoire. A scientific session, dedicated to Beethoven and organised on the occasion of the 175th anniversary of the birth of the great master, was held at the Leningrad Conservatoire in December 1945.

The Kiev Conservatoire, in March 1945, held a session dedicated to the great Ukrainian classic writer Lysenko.

The Moscow and the Leningrad Conservatoires are the oldest in the Soviet Union, and therefore play a leading part in the scientific research work done by all the other Soviet Conservatoires.

Academician Boris Asafiev is in charge of the scientific work of the Moscow Conservatoire. At present he is directing work on the following six subjects: "Glinka and His Contemporaries," "Soviet Musical Culture," "History of Moscow as a Musical Centre," "Theory of Music," "Origin of Music," and "The Terminology of folk-music."

The Leningrad Conservatoire in its research work pays much attention to problems connected with the musical culture of Romanic countries, whose importance in the development of the world's musical culture has often been underestimated.

The research work is proceeding on the following subjects: "French Symphonists of the XIX-XX Centuries," "The French Romance," "Italian Musical Culture of the XIX-XX centuries," "Germanic and Romanic Schools of Conducting," "Peculiarities and the Artistic Value of Romanic Piano Works," "Rousseau as a Musicologist and Composer," etc. Apart from these subjects, extensive research work is also being done on Soviet musical art and on Russian and foreign music.

A number of works on the following composers has been prepared: Glazunov, Rachmaninov, Vladimir Rebikov, Shostakovich, Prokofiev, Khachaturian, as well as on the

Slav composers Smetana, Dvorak, Moniusko, Szymanovsky and Heinrich Wieniavsky.

Among other subjects "Evolution of Harmonic Thought in Russian Music of the XIX-XX Centuries," "Forgotten Romances and Pieces of Vocal and Instrumental Chamber Music by Russian Composers of the XIXth century," and "Glinka and Cherubini" are of particular interest.

Works on "Beethoven's Historic Achievements in the Sphere of Musical Forms," "Beethoven and Cherubini," "Humour in Beethoven's Music," "Beethoven's piano Works" and others were prepared for the scientific session which the Leningrad Conservatoire held at the end of 1945 in memory of Beethoven.

The Leningrad Conservatoire, the oldest Higher Musical Education Institution in Russia, will celebrate its 85th anniversary in 1947. To mark this event the Leningrad Conservatoire is preparing a number of monographs on its famous professors, among whom were Rimsky-Korsakov, Glazunov, Lyadov, musicologists Sakketi and Karatygin, pianists Anton Rubinstein, Leshetitsky and Esipova, violinists Wieniavsky and Auer, cellists Davydov and Verzhbilovich, singers Everardi, Nissen-Saloman, and Ershov.

The Conservatoire is also preparing a brief biographical dictionary which will contain information about professors who taught there during the 85 years of its existence and "A Golden Book of Outstanding Pupils of the Conservatoire," containing details on such musicians as Tchaikovsky, Glazunov, Grechaninov, Myaskovsky, Prokofiev and Shostakovich, musicologists Laroche, Ossovsky and Asafiev, singers Fyodor Stravinsky, Peter Lodey, Elisabeth Lavrovskaya and others.

RESEARCH WORK IN THE NATIONAL REPUBLICS

Scientific work, which is carried out by Conservatoires of the National Republics, is of a special interest. This

work covers a wide field of activity. Conservatoires devote much attention to the art of the people of their respective Republics and to that of their neighbouring Republics, as well as to works by local national composers.

For example, the Kiev Conservatoire is now doing research work on such subjects as "Structural Peculiarities of Moldavian Music," "Symphonic Works by Ukrainian Soviet Composers," "Ukrainian Opera of the Period of the Great Patriotic War," "Piano and Instrumental Chamber Music works by Ukrainian Composers During the War," "Ukrainian Song in Works by Russian Composers," and "Lysenko as a Pianist."

Uzeir Gadzhibekov, professor at the Baku Conservatoire and the most outstanding of the Azerbaijan composers, has recently written a book entitled "The Fundamentals of Azerbaijan Music," which is the result of over 25 years' research work. Professors at the Tbilisi Conservatoire are engaged now on preparing material on "The life and work of Zakharey Palfashvili" (which is a monograph on the classic writer of Georgian music), "Ossetic Folk-Song," "Ornamentation in the Armenian Folk-Song" and "Songs of Western Georgia Created During the Great Patriotic War."

A number of musicologists of the national Republics, besides dealing with these subjects, devote their attention to problems of Russian national culture, and to problems connected with musical art in general. Here are the titles of some of such works: "Aesthetics of Rimsky-Korsakov," "Piano Works by Anton Rubinstein" (Kiev Conservatoire), "Chamber Music Works by Borodin," "Protection of Children's Voices," "Technical and Vocal Possibilities of a Singer" (Tbilisi Conservatoire), "Analysis of Symphonic Suites by Tchaikovsky," "Italian Vocal School" (Erevan Conservatoire), "School and Methods of Teaching of Peter Stolyarsky" (Tashkent Conservatoire).

Professors and teachers at Soviet Conservatoires are particularly interested in problems connected with methods of teaching music and in particular on working out new textbooks on various subjects that could fulfil the requirements of modern scientific methods of teaching.

CENTRAL MUSEUM—MOSCOW CONSERVATOIRE

The Central Museum of Musical Culture at the Moscow Conservatoire occupies a place of importance in the musical life of the country.

It possesses a number of very valuable and unique collections. The archive and manuscript section contains over 250 thousand sheets of music, music autographs, diaries and memoirs of such great Russian composers as Alyabiev, Varlarnov, Verstovsky, Glinka, brothers Rubinstein, Tchaikovsky, Rimsky-Korsakov, Taneev, Glazunov, Rachmanitov, Skryabin, Greenaninov, Ippolitov-Ivanov, Myaskovsky, Prokofiev and Shostakovich, Rachmaninov's material and his personal notes, which are extremely valuable in studying his life and works, has recently been received by the museum from the family of the great composer.

The pictorial section contains a large collection of portraits of composers and musicians, drafts of settings, models of opera stage sets, and posters and programmes of performances and concerts which have a special value in the history of musical art.

The Museum's collection of popular instruments is of exceptional interest. It contains over one thousand popular string, wind and percussion instruments belonging to over 50 different peoples of the Soviet Union, including those which inhabit the most remote regions, such as Eastern Siberia, the Pamirs and the Arctic. The Uzbek Republic alone is represented by about 40 popular instruments of different kinds.

Soviet popular instruments are extremely varied both in shape and structure. Alongside primitive home-made shepherd quills and tambourines made of dog-skin, one finds musical instruments reflecting a high standard of technical maturity, such as the fine Karelian "Kantele" (a kind of zither) and the Byelorussian lyre. The Georgian "Chonguri" with their splendid, rich finish, their silken strings, mother of pearl incrustations and artistic paintings are remarkable.

Some of the instruments are not only of a musical, but also of an ethnographical interest. Here is, for instance, "Abarga", the Oirod horn, which is used for hunting reindeers whose cry it imitates; the "Aphkertsu," an Abkhazian bow instrument with strings made of horse-hair, which is used for comforting the sick; the ancient "Lodka" of the Ostyaks which is played during a ritual ceremony in the course of which guests make a bow to the killed bear. The collection of national musical instruments held by the museum testifies to the almost inexhaustible variety of folklore and folk-music of the Soviet Union.

The film and record library of the museum contains a large number of records and films with recordings made by the best singers and players of the Soviet Union and of the western countries. This library, which is of a great importance for scientific and musical research work, is chiefly used for demonstrations at the Conservatoire, and for popularising the art of music.

The museum carries out regular musical meetings dedicated, to great composers, players, professors of music and to musicians of the past. At these meetings, which are followed by a concert, musicians read papers, or give talks and reminiscences.

From time to time the museum organises large scale musical exhibitions. Interesting exhibitions dealing with the life and work of Tchaikovsky, Rimsky-Korsakov and

Serov have lately been opened there. A Rachmaninov exhibition was opened in October 1945.

Research work on various aspects of musical art is widely carried out by the museum's scientific staff.

The museum is now preparing a large biographical dictionary of Russian musicians; a considerable number of articles have already been written. The dictionary is being edited by the Academician Boris Asafiev, who has nearly 150 writers working with him.

SCIENTIFIC LIBRARY—MOSCOW CONSERVATOIRE

The scientific library of the Moscow Conservatoire, which is the largest institution of its kind in the Soviet Union, has extremely valuable collections of music and musical literature.

This library contains over three hundred thousand works including many rare editions. There are some valuable theoretical works on music published in Amsterdam, Rome and Venice in the XVII century; a number of classical works on the history of English music by Charles Burney and John Hawkins, the XVIII century writers; first editions of oratorios and masses by Handel; Beethoven's "Solemn Mass"; operas by French XVII-XVIII century composers, such as Lulli, Gluck, Philidore, Megule and the Belgian composer Gretry; a collection of vocal pieces written by such XVII-XVIII century English composers as Gibbons, Hawkins, Boyce and Warren; first "musical grammars" and musical text-books published in Russian in the XVIII century; a manuscript score by Verstovsky, one of the leading Russian composers of the last century.

The library also possesses a valuable collection of manuscript scores by XVI-XVIII century Italian composers, rich collections belonging to Odoevsky, the well-known Russian

thinker and musician who died in 1889, and books and manuscripts of the great Russian composer Sergei Taneev, at one time professor and director of the Moscow Conservatoire.

The library has recently received photographed copies of extremely interesting editions of works by Handel, Purcell and the English harpsichordists.

The Moscow Conservatoire is also very proud of its splendid collection of violins made by such famous Italian masters as Stradivarius, Guarneri, Amati and others. Evgeny Vitachek, the well-known Soviet instrument-maker is in charge of this highly valuable collection. He has been asked by the State Music Publishing House to write a book on musical instruments and the secrets of their making.

SPECIAL CONSERVATOIRES

Gnesin School

Apart from the nineteen Conservatoires of the Soviet Union, there is another Higher Musical Institution which is known by the name of the GNESIN MUSICAL PEDAGOGICAL INSTITUTE. This institute was formed in 1944 from a previously existing Music School and Secondary Music School.

The work of the personnel of the Gnesin Musical Pedagogical Institute is characterised by a deeply felt love for music, particularly in relation to young people and their native environment, and by the tradition of a highly artistic approach to the music profession coupled with a real enthusiasm in the sphere of music education. The institute has recently celebrated the 50th anniversary of its activity. Professor Elena Gnesina, who founded the school of music and who has been its director all these 50 years, was a pupil of Vasili Safonov, Feruccio Buzzoni and Anton Arensky. Rachmaninov and Skryabin, who studied together

with Gnesina at the Moscow Conservatoire, supported the school of music. The great Russian composers Grachaninov, Ippolitov-Ivanov and Glier gave lessons at the school.

Outstanding musicians are among those who now teach at the institute. They are the composer M. Gnesin, a pupil of Rimsky-Korsakov, Valentin Ferman and Tamara Livanova who are musical historians, pianist Heinrich Neuhaus, violist Vadim Borisovsky, cellist Semyon Kozolupov and the harpist Ksenya Erdeli.

The Gnesin Institute has produced many a talented musicians. Among its pupils there are such gifted composers as Tikhon Khrennikov, Aram Khachaturian, Evgeny Golubev, Ivan Dzerzhinsky, the pianists Lev Oborin, Alexander Yokheles, as well as a considerable number of experienced teachers, and concert and opera artists.

Continuing the best traditions of the Gnesin school, the Musical Pedagogical Institute set itself the task of providing its students with the fullest opportunity for mastering the art of teaching music. At the same time it aims to bring them up as fully developed and good musicians, since those in charge of the Institute justly regard the mastery of performance as an indispensable prerequisite to fruitful pedagogical work.

Military Band School

THE HIGHER SCHOOL OF MILITARY BAND MASTERS, which functions in Moscow, occupies a place of its own in the system of Musical Education Institutions of the Soviet Union. Its purpose is to form highly qualified musical officers—military band-masters and teachers for military schools of music.

Service men with a Secondary Music School education can apply for admission. Students study musical theoretical subjects, as at the Conservatoire, band and choir conducting and one wind instrument.

Students who graduate from this school are directed to military units as band masters or as teachers.

The experienced conductors Mikhail Bagrinovsky and Alexander Chugunov, Mikhail Tabakov and Georgi Orvid the best Soviet trumpet soloists, are among those who teach at the school.

One interesting aspect of the school's activity is its experimental work on improving and enriching the artistic possibilities of music for brass and military bands. With careful and fine instrumentation, for wind and brass instruments, of a number of symphonic scores, the professors and students of the school have achieved remarkable results.

Naval Band School

THE NAVAL FACULTY AT THE LENINGRAD CONSERVATOIRE, which is organised on lines similar to those of the above school, trains its band masters for units of the fleet. Practical work, consisting of conducting bands in the Navy, occupies an important place in the work of the Faculty. Apart from musical subjects, students at the Faculty also study naval and military matters.

All those who graduated from the Naval Faculty at the Leningrad Conservatoire in 1945, are ex-service men of the recent war.

MUSIC EDUCATION IN GENERAL SCHOOLS

Conservatoires, secondary music and ordinary music schools which make up the Soviet system of special music educational institutions, are not the only medium through which musical art is promoted among the people. Music is looked upon not only as a sphere of education for professional musicians, but also as an essential and inseparable part of general culture and general education. That is why music is taught at general education schools as one of the compulsory subjects.

The general education school curriculum allocates one hour per week to music and singing lessons which are given in the first to the fourth years, that is in the four years of the primary school.

The objects of music lessons at primary schools are to widen the artistic and cultural outlook of the children and to enhance their general education, to develop their musical tastes, to teach them how to understand the language of music and above all to incite in them an interest in and a love for music.

In order to achieve these objects the teacher tries to develop a musical ear and a sense of rhythm in his pupils; he teaches them to sing in chorus and in other ensembles both with accompaniment and without it; he acquaints them with the necessary minimum knowledge of theory of music to enable them to sing by reading music; finally, he acquaints them with the best examples of Russian and other music starting with the simplest examples and passing to more complicated ones. Children learn in a general way how to analyse the structure of musical compositions, to perceive their contents and to judge their artistic value. The teacher tells them about the life and work of the most famous classical composers.

Musical works which are performed in class-rooms for demonstration purposes are arranged with talks on one or other composer, or are based on such themes as "Scenery in music," or "Fairy-tale in music." Besides pieces which the teacher himself plays, musical works are demonstrated whenever possible, by gramophone records and by radio.

The absence of obligatory music lessons in senior classes of the general education school is usually compensated by the children's voluntary participation in choral groups or instrumental ensembles at children's Pioneer Houses; also the most musically-gifted children are sent to special schools and institutions.

Children become acquainted with musical impressions well before school age. In kindergartens, where children go from the age of four or five, great stress is laid on music. Children take part in all sorts of musical games, rhythmic exercises and dances accompanied by music, and in choral singing.

Music plays an important role in the activities of "Pioneer Houses" which are a kind of children's club, very popular with school-children. These clubs organise, as do schools, choral groups and orchestras, and sometimes arrange for piano lessons to be given individually to those who desire them.

THE CENTRAL HOUSE OF ARTISTIC EDUCATION OF CHILDREN at the ACADEMY OF PEDAGOGICAL SCIENCES in Moscow assures a unified, methodical guidance to all types of musical education of children who do not attend special schools. The main principle on which this guidance is based lies in the assumption that music is an essential factor of aesthetic education, one of the most important elements for the formation of a creative and harmoniously balanced personality.

ADULT MUSIC EDUCATION

Another feature of music education in the Soviet Union is the popularising of musical knowledge among adults. This is carried out through evening classes, musical universities and lecture-concerts.

Music courses for adults exist in a number of towns and are very popular with young men and women. Even at the most difficult moment Moscow had to face in the autumn of 1941, when the Germans were approaching the city, new music courses were opened in one of the Capital's districts. Music courses for adults now function in six districts of Moscow.

A music studio has recently been created in a collective farm of the village of Lozovatka near the town of Shpola in the Ukraine. This has been provided with wind and popular instruments, as well as with music. Six pianos have been brought to the studio from the Kiev Conservatoire.

The aim of music courses for adults is to promote the necessary minimum of musical knowledge required by non-professionals and amateurs. All those who are interested in music and who desire to enlarge their musical outlook can be admitted to these courses irrespective of age or of their musical knowledge. The studies are arranged in such a way as to allow workers and employees to attend in their spare time.

Such courses in Kiev developed into an EVENING CONSERVATOIRE. Studies in this Conservatoire last for four years. Members can study singing, piano, wind and brass instruments, orchestral and choral conducting, and popular instruments. The number of persons who want to study at this evening Conservatoire is very large. In the autumn of 1945 there were up to 250 applications for admission to the vocal class which had only 45 vacancies.

LECTURE-CONCERTS also prove very successful. They are held not only in Moscow, Leningrad and other cultural centres of the country but also in such comparatively small towns as Tula, Penza, Chelyabinsk, Omsk, and in a number of rural areas. Twenty-five lecture-concerts were organised in Ashkhabad (Turkmenia) during April, May and June of 1945 and were attended by 8,000 people. The subjects were Turkmenian music—folk-music and works by national Turkmenian composers in the field of vocal, instrumental, symphonic and operatic music; Russian composers—Glinka, Tchaikovsky, Rimsky-Korsakov; and Beethoven.

Collective farmers of several Moscow and Leningrad regions show great interest in lecture-concerts organised in rural clubs and go to them in large numbers.

These lecture-concerts are given by highly-qualified artists, who come from Moscow and Leningrad, as well as by professors and post-graduate students of the Moscow and Leningrad Conservatoires.

Moscow artists and professors gave a series of lecture-concerts on Russian musical culture and on great Western composers to the sailors and airmen of the Soviet Arctic.

Special concerts and musical lectures for children are organised in a number of towns. A series of symphonic concerts for children was given in Kiev in the summer of 1945.

The MUSICAL UNIVERSITY, opened in Moscow early in 1945, is engaged in widespread activity. It is organised for amateur musician concert-goers and sets itself the task of giving them a greater degree of appreciation of music.

Students at this University form an extremely mixed audience both in respect to age and to profession. One can see there young students, middle-aged Academicians, workers, teachers, doctors, engineers and Red Army officers. The programme up to the summer of 1945 included Russian classical composers from Glinka to Skryabin, Soviet chamber and symphonic music and the musical culture of the national Republics of the Soviet Union. In addition a music course was organised at which musical forms, styles in music, instruments of a symphony orchestra, and musical terminology were studied.

Lectures at the Musical University are given by professors and readers of the Moscow Conservatoire. Musical illustrations which accompany the lectures are given by the best artists and chamber-music ensembles of the capital, or

by a symphony orchestra. A series of explanatory booklets was issued for the sake of the students of the Musical University. Every lecture had an exhibition specially organised for it. The materials came from Moscow's theatrical and musical museums and served to illustrate the subjects dealt with in the lecture.

The programme of the University will next deal with Western music and particularly with Viennese classics (Haydn, Mozart and Beethoven), Italian and French opera, romantics of the XIX century (Chopin, Liszt, Dvorak and Grieg), the French impressionists (Debussy and Ravel) and modern English and American composers (Vaughan Williams, Arnold Bax, Alan Bush, John Ireland, Elie Siegmeister and Roy Harris).

A number of lecture-concerts will deal with the history of Russian romance from Alyabiev, Gurilev and Varlamov to the present day. Students taking another special course will carry out a close study of Russian symphonic and operatic music.

More than two thousand students now attend the Musical University.

Universities of Musical Culture, similar to the Moscow Musical University, have been created in several towns of the Ukraine, including Kiev, Kharkov and Dniepropetrovsk.

FULL EMPLOYMENT OF MUSICIAN

Soviet music education with its Conservatoires and numerous secondary and other musical schools is in harmony with the widespread demand for musically qualified people, which is shown throughout the sixteen Republics of the U.S.S.R. Every Soviet musician who graduates from a musical institution is certain of getting permanent work as soon as he finishes his studies. Professional music, as is work of any other kind in the Soviet state, is free from

the fear of unemployment. The country, whose intensive musical concert and theatrical life provides ample opportunities for full employment, wants all her musicians, players and singers, composers and teachers, conductors and chorus masters, musical historians and theorists alike. All the constituent Republics and regions of the Soviet Union, including the most remote (which under tsarism were forlorn, backward places), actively participate in the musical life of the country.

II

CONCERT LIFE

STATE PHILHARMONIC SOCIETIES

Concerts in the Soviet Union are organised in the main, by the State Philharmonic Societies which are to be found in all the large towns of the country and the majority of its regional and Republic centres.

Every Philharmonic Society has many qualified artists at its disposal, including chamber music ensembles and large State orchestras.

Among chamber music ensembles working in this way are such well-known string quartets as the Beethoven Quartet in Moscow, the Glazunov Quartet in Leningrad and the Villaume Quartet in Kiev.

Among State ensembles and orchestras are the famous Red Army Ensemble of Song and Dance conducted by Alexandrov, the Leningrad Philharmonic Orchestra whose artistic standard is high and which is conducted by Evgeny Mravinsky, fine choral societies such as the Moscow Choral Society conducted by Alexander Sveshnikov, the Leningrad Choral Society conducted by Georgi Dimitrievsky, the Kiev "Dumka"* Choral Society, and the Lvov "Trembita" † Choral Society, as well as brass bands and orchestras of popular instruments.

For the Philharmonic Societies of Soviet Central Asia alone—that is to say in Kazakhstan, Uzbekistan, Tadzhiki-

* This name is given to lyrical, thoughtful songs of the Ukrainian people.

† Name given to one of the popular instruments of the people of the Western Ukraine.

stan, Kirghizia, Turkmenia—there are 25 musical ensembles and groups.

Concerts are given in all regions of the Soviet Union, including the Altai, the Krasnoyarsk Region, Yakut Region, Karaganda, Far Eastern Maritime Region, Sakhalin and Kamchatka. Long distance concert tours have been made by many of the best artists of the country, such as Kazlovsky, Barsova and Pantofel-Nechetskaya singers, Oborin and Gilels pianists, and the violinist Oistrakh.

The Leningrad Glazunov Quartet has visited 265 towns of the Soviet Union during the 25 years of its existence.

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Concert life in the Soviet Union continued throughout the wartime years despite all hardships.

In 1943, when large areas of the Soviet Union were overrun by the German invaders, Soviet Philharmonic Societies organised, in the rear, 118 thousand concerts which were attended by 45½ million people. Symphony concerts alone totalled 1,400 and were attended by one million people. Certain Philharmonic Societies had to be temporarily evacuated to the east from a number of towns.

The Leningrad Philharmonic Society was moved to Novosibirsk. During its three-year stay in Siberia it organised about 9,000 concerts, including performances given for the Ural and Kuznetsk in the Altai and the Naryn Regions. The Philharmonic Society returned to Leningrad in the autumn of 1944. In its home-town, during the 1944-45 season, the Philharmonic Society gave about 80 symphony concerts which were attended by close on a hundred thousand people.

On the other hand Moscow concert halls did not interrupt their activity for a single day throughout the whole

war and the Ukrainian Philharmonic Society renewed its activity immediately after the liberation of the Ukraine; it organised, in the course of the first year, over 1,200 concerts throughout the Republic. This included 300 concerts in the Donetz Basin, in factories and mining towns.

Tens and hundreds of thousands of concerts were given for men and officers of the Red Army and the Red Fleet during the war. Concert brigades heroically continued their work at the front, in military field hospitals, in trenches and dug-outs, sometimes under enemy artillery fire, bringing the solace of music into the grim every-day life of the war. Concerts are often organised for returning demobilised service-men.

Philharmonic Societies devote much attention to the question of giving concerts for workers and collective farmers. The Kazakh orchestra of popular instruments gave concerts for the metal workers of Chimkent, and the oil industry workers of Guryev for the fishermen of the Caspian Sea.

The Armenian Philharmonic Society in the summer of 1945, sent all its available ensembles and soloists to collective farms, to entertain collective farmers during the harvest. Uzbek and Tadjik musical ensembles give concerts on the cotton plantations, as well as on large-scale construction sites, promoting the best works of folk music. Kirghizian artists gave hundreds of performances in the course of the last year entertaining the fishermen of Lake Issyk-Kul, inhabitants of the mountain villages and pasture-lands in the Then-Shan and Altai Mountains.

PROGRAMMES

The programme of concerts of solo, symphonic and chamber music organised by Philharmonic Societies is extremely varied. Among the most often played are: sym-

phonic works by Myaskovsky, Prokofiev, Shostakovich, Vasilenko, Khachaturian and Shebalin; oratorio by Shaporin; works for chamber music combinations by Glier, Myaskovsky, Shebalin and Anatoly Alexandrov; songs by Solovyev-Sedoy, Zakharov and Alexander Alexandrov, the author of the Soviet national anthem.

Ukrainian audiences are particularly fond of music by Lyatoshinsky and Revutsky; the Byelorussian public is fond of works by Tikotsky and Bogatyrev; in Georgia music by Mshvelidze and Kiladze is more appreciated; Ashrafi is popular in Uzbekistan and Gadzhibekov in Azerbaijan.

But the achievements of musical culture of this or that constituent Republic are by no means confined within political or geographical boundaries. Works by national composers of the various Republics are often performed elsewhere, especially in Moscow where the following works have recently been given: symphonies by Ashrafi and by the young Georgian composer Balanchivadze, the Ukrainian Quintet by Lyatoshinsky, fragments from new Armenian operas, vocal compositions by Baltic composers and so on.

The recent war which strengthened the patriotic feelings of the entire Soviet people, deepened their love and esteem for the inheritance of their national artistic culture.

The war years gave new meaning and strength to Glinka's two operas—"Ivan Susanin" and "Ruslan and Ludmila"—to his symphonic and vocal works, as well as to Tchaikovsky's operas, to his six symphonies, poems, suites, concertos, works for chamber music and romances which his lyricism coloured with such warmth. In the course of these difficult years the Russian people have found new strength in the power of Borodin's music, in the heroic epic, "Prince Igor" and the "Heroic Symphony," as well as in the great works of Rimsky-Korsakov.

The works of Rachmaninov and Skryabin appear particularly often in the programmes of symphony concerts and piano recitals.

The 50th anniversary of the death of Anton Rubinstein, the 30th anniversary of the deaths of Taneev and Skryabin, the 80th anniversary of the births of Glazunov and Grechaninov were marked by many performances of their works.

Finally, masterpieces of western music by old and modern composers occupy a place of importance and honour in the musical life of the Soviet Union. Works by the Slav composers, Chopin, Moniusko, Smetana, Dvorak and Wieniawsky, are often played. Foreign to any form of chauvinism, Soviet concert organisations continued, even in the days of war, to promote the music of Bach, Schuman and Brahms, as well as the works by the great Viennese masters—Haydn, Mozart, Beethoven and Schubert.

The 1945-46 concert season in Leningrad saw the performances of all the four symphonies by Brahms, as well as symphonies by Mahler and Bruckner.

Many performances of such monumental works of western music as the Mass in B minor by Bach, the oratorio "The Seasons" by Haydn, Requiems by Mozart, Berlioz and Verdi, as well as the 9th Symphony by Beethoven take place. Handel's oratorio "Samson" figures in the programme of the 1945-46 symphonic season in Moscow. Concerts of chamber music, consisting of works by Schubert, List, Grieg, Debussy and Ravel, are very popular.

Classical music of western European countries finds its way into the most remote places in the Soviet Union. Chamber music by Beethoven and Schubert has recently

been performed at a concert in the town of Molotov in the Urals, while Alma-Ata in Kazakhstan heard works by Grieg and Cesar Franck. Waltzes by Johann Strauss are extremely popular everywhere in the Soviet Union. Soviet audiences show a keen interest in works by modern British and United States composers whose works have been performed in a series of special concerts.

OPERAS IN CONCERT FORM

Operas, given in concert form, occupy a special place in the programmes of Soviet musical activities. This type of concert is becoming more and more widespread. For instance, in the course of the 1945-46 Moscow season, the main scenes from the following operas were given: "The Stone Guest," by Dargomyzsky, "Boris Godunov," and "Khovanshchina" by Musorgsky, "Aleko" and "Francesca da Rimini" by Rachmaninov, "Samson and Delila" by Saint-Saens, "Othello" by Verdi and the Operetta "The Princess of the Circus" by Kalman. Preparations are now in progress to give the main scenes from the operas "Sadko" and "The Legend of the Invisible Town of Kitesh" by Rimsky-Korsakoy, "Il Seraglio" by Mozart and the operetta "The Merry Widow" by Lehar.

Soviet Opera Ensemble at the All-Russian Theatrical Society has been very active in promoting this new art form. The producer Constantin Popov, pupil of Stanislavsky, has been able to achieve great results both in standard of performance, and in volume of production. During the ten years of its existence the ensemble performed over 50 Soviet operas.

Among its latest performances are "Sebastopolians" by Marian Koval, in which the author relates the epic story of the heroic defence of Sebastopol during the recent war, "The Treasurer's Wife" by Boris Asafiev based on Ler-

montov's poem of the same title, "Singers" by Alexander Goldenveiser based on the subject of a short story by Turgenev and finally "War and Peace" by Sergei Prokofiev based on Tolstoy's novel. The ensemble had the honour of giving the first performance of this work by the great master of Soviet music.

Constantin Popov's ensemble, besides being the "laboratory" of Soviet opera, is simultaneously promoting Russian and western operas which are little, or even not at all, known to the Soviet public. Last year it performed "Dobrynya Nikitch" by Grechaninov, "Asya" by Ippolitov-Ivanov and "Oresteya" by Taneev. It also introduced American opera to the U.S.S.R. by performing George Gershwin's "Porgy and Bess," which proved extremely popular and has been often repeated.

FESTIVAL CONCERTS

Competitions of artists represent another characteristic feature of Soviet music life. They are organised either as Republic or as All-Union competitions. They encourage young artists and develop Soviet musical culture to a higher level. The latest All-Union competition began in the autumn of 1945 and lasted until December. Professional pianists, violinists, cellists, harpists and singers take part in these competitions. The best artists of the Ukrainian and Baltic Republics, of Transcaucasia and Central Asia, of all parts of the country come to Moscow where the final competition and distribution of prizes takes place.

OPERA AND MUSICAL COMEDY

Musical theatres of the Soviet Union can be divided into two categories: (1) theatres of opera and ballet, (2) theatres of musical comedy and operetta.

Below is the geographical distribution of musical theatres throughout the country:

Republics	Theatres of opera and ballet	Theatres of musical comedy and operetta	Total
Russian Soviet Federal Socialist Republic (R.S.F.S.R.) ...	17	23	40
Ukraine and Moldavia ...	6	2	8
Byelorussia ...	1	1	2
Transcaucasian Republics ...	3	3	6
Republics of Central Asia ...	5	3	8
Baltic Republics ...	4	2	6
Total of musical theatres ...	36	34	70

The various Union and Autonomous Republics each have their national theatres which are a new feature of the country's life, for they owe their existence to Soviet power. Having freed themselves from the century-long oppression to which the peoples of the former Russian Empire were subjected under tsarism, they have made gigantic strides, in the last twenty-five years, in the direction of economic and cultural progress.

This development has had an important bearing on the condition of the theatrical and musical art of the national Republics. The work of national composers is developing and national musical theatres are springing up one after the other. At the same time the number of artists for national operas is growing.

The names of the Azerbaijanian artist Bul-Bul Mamedov, of the Kazakhstan woman artist Kulyash Bayseitova, of the Armenian woman artist Aykanush Danielyan and of the Uzbek women artists Khalima Nasyrova and Tamara Khanum, all of whom are very good singers and remarkable dramatic artists, are very well known in music circles of the country.

The war inflicted extensive damage on theatre buildings. In areas where fighting took place and in regions occupied by the Germans many theatres were destroyed. Those in Kalinin, Daugavpils and other towns were burnt down.

But the theatre artists and workers were evacuated to the east where they continued their work. Thanks to these measures, the work of Soviet musical theatres proceeded during the war with its customary activities. In 1948 alone, when large areas of the country was occupied by the German invaders, performances given by musical theatres throughout the country totalled 14,000, and were seen by about 12 million people.

Theatrical life began to revive in the very first days after liberation from the Germans. New theatres of opera and ballet were opened in Ashkhabad (Turkmenia) and in Penza (R.S.F.S.R.) during the war. A new theatre of musical comedy was created in Minsk. In May 1945 a musical theatre housed in a splendid building was opened in Novosibirsk. The hall of this theatre is one of the largest in the country; it has almost 2,000 seats and is not much smaller than the hall of the Bolshoi Theatre in Moscow.

OPERA REPERTOIRE

The repertoire of musical theaters provides a striking illustration of the successes achieved by the Republics of the Soviet Union in the sphere of musical culture.

The basic part of the theatre's repertoire in all Republics consists of works created by composers of the given Republic. Thus the Baku theatre performs operas by Uzeir Gadzhibekov and Muslim Magomaev, the best Azerbaijanian composers; the Erevan theatre performs the opera "Almast" by the classic writer of Armenian music, Alexander Spendiarov, and the ballet "Khandut" arranged from his music; the Tbilisi theatre performs the operas

"Abessalom and Eteri" and "Daisi" by Z. Paliashvili, who is one of the founders of Georgian music.

The Kazan theatre gives operas by the Tatar composer Nazib Zhaganov; the Kirghizian opera "Ai-churek" is performed in Frunze; the Tashkent theatre performs a number of Uzbek operas by Mukhtar Ashrafi, Talib Sadykov and others; the Mordvinian opera, "Nesmeyana and Lanizur" by Kurukov has recently been performed in Saransk (Mordvinian Republic); "Ruta" by Gringeld and "Flame of Vengeance" by Kapp, which are the first national operas of the Baltic Republics, are shown in Riga and Tallinn respectively.

There is much interchange of "national operas" between the Republics.

Russian classical operas occupy an important and considerable place in the repertoires of opera theatres not only in Moscow and Leningrad but also in all musical theatres of the Soviet Union. Tchaikovsky is especially popular. His "Eugene Onegin" is performed in Penza and Riga, Kazan and Stalinabad (Tadjikistan), Alma-Ata (Kazakhstan) and Ulan-Ude (Buryat-Mongolia). The "Queen of Spades" is performed in Tashkent with the entire libretto translated into the Uzbek language. Rimsky-Korsakov, like Tchaikovsky, is very popular too: his "Tsar's Bride" is performed in Kharkov, Lvov, Baku and Alma-Ata.

The Kaunas opera theatre in Lithuania is giving "The Legend of the Invisible Town of Kitesh," which is at the same time one of the most perfect and the most difficult to produce of all Rimsky-Korsakov's operas. The Novosibirsk opera theatre is also preparing a production of this opera. A number of opera theatres give "Ivan Susanin" by Glinka and "Rusalka" ("Mermaid") by Dargomyzhsky. The Tashkent opera theatre has recently given the first performance of Borodin's opera "Prince Igor" in the town.

The Soviet audiences love and appreciate the immortal operas by western masters. There is not a single opera theatre in the Soviet Union which would neglect the inheritance of western European classics. Verdi, Gounod, Bizet and Puccini are most popular. "Traviata" and "Rigoletto" are among the favourite operas of the millions of the Soviet audiences.

The later and more complex operas by the great Italian master are not forgotten either, however. "Aida" is performed in Baku, "Othello" in Alma-Ata, and Leningrad gives a revival of "Falstaff." "Faust" and "Carmen," so popular with opera-goers all over the world, are performed in many of the Soviet theatres. "Carmen," like "The Queen of Spades" by Tchaikovsky, is performed in Tashkent in an Uzbek translation. Of all Puccini's operas, "Madame Butterfly" is the most often performed; it is given in Armenia, Kazakhstan, Bashkiria and Kirghizia. "Tosca" is performed in Tbilisi and Kharkov.

MUSIC BROADCASTS

Music broadcast by the wireless plays an immensely important part in the everyday life and musical culture of Soviet men and women.

Music broadcasts take up almost one half of the time allocated to all broadcasts. Over 8,000 musical works were broadcast by the Moscow station during 1945.

A fair proportion of such broadcasts is taken up by "light" music which is put over the air mainly during the late hours when listeners want entertainment and relaxation from the labours and worries of the day. Nevertheless, much more time and attention is devoted to musical works of a more serious character, acquaintance with which develops the listener's taste and widens his artistic outlook.

The programme of music broadcasts is extremely rich and varied. It is widely representative of all styles of musical art both of the past and of the present. It consists of the folk-music of the peoples of the Soviet Union and of foreign countries, of works by Soviet composers and of Russian and Western classical works. There are daily broadcasts of programmes performed by the best artists, musical ensembles and orchestras of the country. These programmes are, in part, broadcast from gramophone records and films. Every day one can hear operas and symphonies, instrumental pieces, romances and arias.

A stream of letters flows daily to the All-Union Radio Committee in Moscow from all parts of the country. Listeners give their opinion on broadcast programmes, note what they liked best and finally express their wishes as to artists and works they would like to hear.

These requests come from people in all walks of life, they are sent by collective farmers and miners, railwaymen and sailors, students and airmen, soldiers of all ranks, and sportsmen. Some of them ask for a repeat performance of their favourite folk-song, others ask for Beethoven's "Egmont" and "Coriolan" and others request a special recital by their favourite singer or pianist. The staff of the All-Union Radio Committee take note of the wishes of the country and try to meet its desires. Concerts "on requests from listeners" have become a permanent feature of Soviet music broadcasts.

Demonstrations of new Soviet works are regularly broadcast by radio. The serial called "Outstanding Artists of the Past," featuring the life and work of such artists and masters as Chaliapin, Sobinov, Rachmaninov, and which gives demonstrations from their own recordings, is very popular with listeners.

Music broadcasts for children of different ages are made with great care and consideration. Two and a-half hours

per week are allocated to this kind of broadcast. Young audiences listen with keen interest to such programmes as "Portraits of composers," broadcasts of folk-songs of the peoples of the Soviet Union, Great Britain, America, France, Poland and other foreign countries, talks given by Soviet composers on their latest works, serial programmes destined to give a closer acquaintance with the inheritance of Russian and western musical culture.

Children's music magazine, which has lately been introduced as a new feature of the broadcasts, has gained a widespread popularity among children.

The chief editor of this original magazine is Dmitri Shostakovich.

Among the contributors to the magazine are the outstanding Soviet composers: Sergei Prokofiev, Dmitri Kabalevsky, Vissarion Shobalin (all Conservatoire professors), and the writers Boris Pasternak, Constantin Fedin and others.

The magazine sets itself the task of developing the artistic taste of children, of increasing their love for and understanding of music and of imparting, in an entertaining way, material capable of enlarging and enriching their knowledge of musical art. The contents of the magazine are talks and stories on musical subjects, discussions on various musical problems, performances of children's favourite works from their requests, musical riddles, as well as questions and answers. Children impatiently await Sunday morning to hear the next issue of their magazine.

MUSIC PUBLISHING HOUSES

Most musical works, as well as large numbers of books on music, are published by the Moscow State Publishing House which did not interrupt its intensive and energetic activity of providing the country with musical literature during the difficult war years.

Special attention was then given to war songs. Nearly 480 mass war songs with a total circulation of over 18 million copies were published. Several collections of Russian, Ukrainian, Byelorussian folk-songs, songs of the famous Don Cossacks, and British and American songs were also published.

At the same time the publication of important works of Soviet and classical music, as well as of books on musical art, was continued.

The publications list included the piano score of the "Gayane" ballet and the score of the Violin Concerto by Khachaturian, the score of the 7th Symphony by Shostakovich, and the score of the 8th quartet by Myaskovsky, that of the "Lyrical Poem" by Igor Belza, of the overture "Friendship of Peoples" and "Slav Overture" by Glier, of the 2nd Quartet by Prokofiev, and further volumes of the 75-volume Academic Edition of Tchaikovsky's works (the earlier piano pieces) and of the 65-volume Academic Edition of Rimsky-Korsakov's works (romances). New piano Sonatas by Myaskovsky were also published, as well as Sonatas by Prokofiev and Shostakovich.

The publication of six volumes of "Soviet Music" is of great interest. They contain a number of valuable data and articles concerning works by Tchaikovsky, Rimsky-Korsakov, Rachmaninov, and Soviet composers, as well as articles on Chaliapin, Sobinov and on the musical culture of Britain and America.

The fifth volume of the book by Andrei Rimsky-Korsakov on the life and work of his great father during the last period of his life, Boris Asafiev's monograph on Glinka and his books on Grieg, on Tchaikovsky's "Sorceress" and on the Czech musical renaissance will appear shortly. The Dominor Symphony by Taneev and the String Sextet and trio by Borodin, which have not yet been published in Russia, are ready for publication.

A book in memory of Taneev containing a number of articles and unpublished documents, a book "Essays on the development of Soviet music" and monographs on the famous Russian singer Nezhdanova, the composers Vasilenko and Shostakovich are also to be published in the near future.

The following important works by Soviet composers are to be issued shortly: the 13th and the 24th symphonies by Myaskovsky and his Cello Concerto, the 8th Symphony by Shostakovich, the 5th Symphony and "The Russian Overture" by Prokofiev, the 8rd Symphony by Shebalin, the 2nd symphony by Khachaturian, the Opera "Emelyan Pugachev" by Marian Koval (complete piano score), the Cantatas "Alexander Nevsky," and "Ode to Stalin," the Ballet "Romeo and Juliet" by Prokofiev, new String Quartets by Glier, Myaskovsky, Shebalin, Shostakovich, Anatoly Alexandrov, Lyatoshinsky and others.

Another music publishing house of importance, the Music Fund Publishing House at the Union of Soviet Composers, brings out new works by Soviet composers. The majority of works printed by this publishing house are done by glass-engraving. The printed scores and books are distributed first of all among the institutions concerned, to music libraries and theatres, Radio Committees, Houses of People's art, and to Houses of the Red Army; the remainder goes for sale to the general public.

The Music Fund Publishing House published during the war and the first months after the end of hostilities, a large number of works ranging from songs and romances and small instrumental pieces to piano scores of operas and symphonic scores. Much attention was then given to mass songs on war themes, as well as to folk-songs.

This Publishing House brought out an interesting collection of war songs to mark the occasion of the 25th anniversary of the Red Army, as well as a collection of songs of the peoples of the United Nations and a number of collections of Russian, Yugoslav, Czechoslovak, Polish, Georgian, Byelorussian, Baltic, Buryat-Mongolian and Central Asian folk-songs arranged by Soviet composers.

Among published lyrical vocal works it is interesting to mention collections of romances on Pushkin's poems by Shostakovich, Muradeli and other composers, and songs to words of British poets by Shostakovich.

Among chamber music works published by the Music Fund Publishing House are the following: 2nd Sonata for Violin and Piano by Prokofiev, new String Quartets by Shebalin and Anatoly Alexandrov, Concerto for Harp and Orchestra by Gliere and Concerto for Violin and Orchestra by Shebalin.

The Music Fund Publishing House also brought out piano scores of the following orchestral works: 21st and the 24th Symphonies by Myaskovsky, the 7th Symphony by Shostakovich, the 2nd Symphony by Khachaturian, the 2nd Symphony by Muradeli and other works; also piano scores of Khrennikov's incidental music to the comedy "Much Ado About Nothing" by Shakespeare, of fragments from the opera "Nadezhda Svetlova" by Dzerzhinsky and of other works.

Piano scores of the following operas were also brought out by the Music Fund Publishing House: "War and Peace" and "Wedding in a Convent" (based on "Duenna" a play by Sheridan) by Prokofiev, "Bela" (based on Lermontov's novel "The Hero of Our Time") by Anatoly Alexandrov, "Emelyan Pugachev" by Marian Koval (based on the theme of the peasant rising in Russia at the end of the XVIIIth century), "Near Moscow" by Kabalevsky (based on the epics of the heroic defence of Moscow

in the autumn of 1941) and finally, piano scores of the following ballets: "Cinderella" by Prokofiev, "Gayane" by Khachaturian, "Tatiana" by Alexander Kerin and "Scarlet Sails" by Yurovsky.

CONDITIONS OF WORK FOR PROFESSIONAL MUSICIANS

All professional musicians in the Soviet Union—composers and musicologists, music-teachers, artists of the stage, solo and orchestral players—are provided by the State with material conditions ensuring them the opportunity of working fruitfully and without anxiety.

Remuneration for the work of musicians of all types is fixed in accordance with the standard of their qualifications, the length of their employment, as well as the category of the institutions in which the musician is employed. The salary of a musician in a leading theatre in a city is higher than that paid in small-town theatres. Women and men get equal pay provided they fulfil, to the same extent, the above three conditions. Higher individual rates of salaries are fixed for outstanding musical workers, such as Doctors of Art, Artists of Merit and People's Artists.

A special Government decree fixed higher rations and better supplies of goods for musicians, as well as for scientists and writers. There are special restaurants and general stores for musical workers, as well as special workshops in which their clothing and shoes can be made and mended. They are provided with comfortable housing accommodation.

Musicians, as a rule, are members of the Art Workers' Trade Union, while composers and musicologists are members of the Union of Soviet Composers. Artists of music theatres are members of the Theatrical Society.

All these trade union and other organisations take great care of the material and social welfare of their mem-

bers. Cultural workers are provided with rest-homes for summer holidays. The All-Russian Theatrical Society, for instance, has at its disposal splendid rest-homes on the Volga and in the Caucasus. The rest-homes of the Art Workers' Trade Union, which were destroyed by the Germans, are now being reconstructed near Leningrad, in the Caucasus and in the Crimea.

The Union of Soviet Composers has a network of splendidly equipped rest-homes near Moscow, Leningrad and Odessa, in Czernovits and near Tuapse on the Black Sea. At the rest-centre in a village near Ivanov, where composers with their families spend their holidays in beautiful surroundings, Prokofiev wrote his 5th Symphony and Shostakovich his 9th Symphony and a Trio and a Quartet.

There are special "Pioneer Camps" for children of musical and theatrical workers. The Art Workers' Trade Union sends several thousand children to these camps every year.

The Union of Soviet Composers guides musical and creative activity throughout the country. Popularisation of works by Soviet composers, assistance for their professional artistic and cultural development and encouragement, by all possible means, of high artistic standards in musical creative work are its main purposes.

The central offices of the Union are in Moscow and it has branches in all the large towns of the country. It organises regular auditions of new works by Soviet composers and discussions concerning them by a consultative commission consisting of the greatest Soviet composers.

A special military commission examined and gave its opinion on hundreds of mass patriotic songs during the war.

A commission on musicology organises lectures at which papers on general musical problems, or on some of the more important Soviet composers, are read.

To popularise Soviet music, the Union of Soviet Composers organise public "reports on creative work" which are made by Soviet composers, and concerts of their symphonic and chamber-music works.

The task of encouraging the musical creative work of a composer is carried out by the Union of Soviet Composers. When the music fund of the Union concludes an agreement with a composer for the composition of an opera, symphony, or other large scale musical work, it guarantees the author a definite fee, part of which is paid to him in advance. Such agreements are also concluded by the Committee on Art Affairs.

Competitions, organised by the Committee on Art Affairs in conjunction with the Union of Soviet Composers, have the same object of encouraging the composer's work. These two bodies organised nation-wide competitions for the best war song and for the best victory song.

Leading composers are called upon to work with young and not-fully-developed composers in order to improve their professional skill and standards, if the young composers concerned so desire. Also, performances by outstanding players are given in the presence of composers, and at meetings between composers, artists, poets and scientists of the country, as well as performances of new works by western composers. In the course of 1945 the Moscow Union of Soviet Composers organised concert-meetings dealing with works of Hindemith, Schonberg and Stravinsky, and with Anglo-American jazz and other subjects. At such meetings much use is made of gramophone records in addition to actual performances. The Union of Soviet Composers has recently held special sessions to commemorate the 30th anniversary of the deaths of Taneev and Skryabin at which works by these two great Russian masters were performed.

AMATEUR MUSIC-MAKING

A characteristic feature of Soviet musical life is the amateur music-making which is carried on all over the country and which consists of non-professional musical activity by individual amateurs, and by large groups, such as choral societies, ensembles of song and dance, orchestras of popular instruments, string and symphonic orchestras and brass bands.

Throughout the vast territory of the Soviet land men and women of all nationalities, professions and walks of life, small children and old folk, take an active interest in amateur music societies and amateur concerts. Before the war choral societies alone totalled 12,500 with some 227,000 workers, employees and their families taking part.

Nor did the amateur music-making die down during the war despite the fact that many members of amateur societies were called up. Many a new song, inspired by the heroic struggle for the Motherland, was created during this grim and difficult time, and many a new amateur society came into being.

Members of amateur musical societies carry out their voluntary activity with real enthusiasm and devotion to art. On one occasion, members of amateur societies came to attend a regional rally of popular art held in Archangel; they came on skis from far-off villages covering a distance of 200-250 miles under severe winter conditions.

The most gifted amateurs are often sent to special music educational institutions, or become professionals. In this way the new professional ensembles of Byelorussian Folk-Song, the Ensemble of the Don Cossacks and others sprang up from among the best members of former amateur societies. The amateur music-makers, therefore, are the reserves from which the professional artists can draw new strength.

Professional musicians in their turn co-operate with amateur societies and help them with advice and guidance. Artists, musicologists and composers travel to towns and villages up and down the country and help in organising amateur ensembles and societies, and in selecting the best musicians from the ranks of the people who are to take part in "review concerts." They often enable these naturally talented musicians to attend musical schools and Conservatoires.

The repertoire of amateur ensembles and soloists is extremely varied in technique and style. Some sing and play folk-songs, others perform works by Soviet and classical composers. Choral ensembles sing mostly Russian, Ukrainian and other folk-songs. They usually sing not from music, but by ear; they sing what they hear on the wireless or on gramophone records, or what has been passed on from one singer to another, sometimes for many generations. Singers of the best ensembles are, to some degree, composers, for they make extensive use of improvisation in the melodic design of a song. Such highly skilled choirs as the choir of Armenian teachers sing quite complicated polyphonic works.

Some of the best amateur societies attain a very high standard, not far behind professional standards. Their pitch is remarkably correct, their interpretation is extremely flexible and their understanding of the true style of the work they perform is really striking.

Particularly outstanding is the choir of old workers of the Ural machine-building plant in Sverdlovsk. This is a large choir which performs by ear in three parts and has a rich repertoire of old folk-songs of the Urals.

Another of great interest is the Choir of the Russian Folk-Song of the Moscow Region which is directed by the 70-year-old peasant Peter Yarkov, who, although he never had any special musical education, has a feeling and an

understanding for popular music. This choir carefully preserves all the characteristic features of the old way of singing and local peculiarities of the ancient folk-songs of the Moscow Region.

Good amateur societies are very popular with the public. The Choral Society of the South-Western Railways has given almost one thousand concert performances for railway employees and workers in the course of the 20 years of its existence. The singers at the 1945 All-Union Rally of Amateur Choral Societies, which took place in Moscow, gave performances to over one million people.

To meet the widespread interest shown by the Soviet public in amateur music making, the Moscow Philharmonic Society has organised monthly rallies of such musical activities during the 1945-46 season. The programmes of these concert-rallies will consist of selections from the national art of Azerbaijan, Armenia, Turkmenia, Tadjikistan, Kirghizia, Lithuania, Latvia and Estonia.

Artistic activity of the numerous peoples of the Soviet Union is rich, varied and colourful. Songs and instrumental melodies, charming in their simplicity and vivid in imagination, reflects as in a mirror the immense creative wealth of the people.

HOUSES OF PEOPLE'S ART

The Soviet Government devotes much attention to this art of the people through the "Houses of People's Art," which exist throughout the country. Such centres are to be found in all the main towns. The general work of these centres is guided by the Nadezhda Krupskaya All-Union House of People's Art which is situated in Moscow.

The Houses of People's Art give practical aid to all those who make music as amateurs. Consultations are given to amateur poets, singers and musicians, and to

amateur societies, as well as to those who direct them. This is achieved by sending out circular-letters, by issuing scores, musical instruments, etc., for the whole of the country; and by organising courses and lecture series. Regular courses are organised for conductors of amateur choral societies and orchestras.

To help members of musical groups and amateur soloists, a concise musical dictionary containing essential information on general musical subjects was published.

Another important activity of the Houses of People's Art is deciding upon the repertoire for musical groups and supplying them with the necessary music.

To aid the various groups by an exchange of experiences the All-Union House of People's Art periodically calls special meetings, which are attended by talented artists, music research workers and authorities on folk-music who come to Moscow from all parts of the country.

AMATEUR CONCERTS

Competitions and concert-rallies of amateurs are often organised by the Houses of People's Art to encourage talented artists and those who take part in various activities connected with popular art. First, preliminary concert-rallies are organised in all regions of the country. Those who pass this contest are sent to take part in regional or Republic concert-rallies; finalists then go to Moscow to take part in the last stage of the All-Union Concert-Rally.

September 1945 saw the end of a nation-wide concert-rally of choirs and solo singers. Thirty-six groups with over two thousand participants gave their performances in the last concerts of the rally which took place in the hall of the Moscow Bolshoi Theatre and another large concert hall in the capital.

This friendly emulation of talents brought together Magnitogorsk metal workers from the Urals and employees from Tallinn, oil industry workers from Baku and Armenian teachers, Moscow women weavers and automobile workers from Gorky and Moscow. There were representatives of all trades and professions among the best performers of the concert-rally—book-keepers and dockers, doctors and firemen, engineers and bricklayers.

Amateur musical ensembles often give concerts in the fields to entertain collective farmers. Professional musicians often went to the front during the war to assist the amateur army bands and ensembles in their work. Brigades of people's poets, singers and musicians entertained the troops and received a very warm welcome everywhere.

The choral group and the symphony orchestra of scientific workers at the House of Scientists in Moscow are among the best amateur ensembles of the U.S.S.R. for their originality and artistic maturity. The singers and players are professors, readers, the scientific workers and personnel of scientific research institutes and the higher schools of the capital. Most of their time is taken up by important scientific and teaching activity, but they willingly sacrifice the leisure hours they have to their favourite art.

The 65-year-old Vladimir Zernov, who is the leader of the orchestra, is an eminent scientist, awarded the Order of the Red Banner of Labour. Among the first violins of the orchestra are Professor Hermann Kalish, an expert on internal combustion engines, Doctor Peter Dolgov, an astronomer and Nikoloi Khvostov, lecturer on English language and literature. The second violins include Maria Ivanitskaya—anatomopathologist, Abram Lopshitz—mathematician, and the writer Yakov Frenkel. Among the cellists is Karra, scientific worker at the Institute of

World Economy and Alexander Grigoriev, professor of medical jurisprudence; Yuli Rubinov, an engineer of thermotechnics, plays the clarinet.

Professor Victor Sadovnikov, who studied with Taneev and Glier, has directed the musical group and conducted the choir and symphony orchestra since their formation in 1934.

In the course of the last few years this group has performed many works, among which were such difficult compositions as Haydn's Oratorio, "The Seasons," Schuman's Oratorio "Pilgrimage of the Rose," Rimsky-Korsakov's Cantata "Svitezyanka" and Liszt's Symphonic Poem "Prometheus."

The technical skill, balanced sonority of the instrumental grounds, correct pitch and expression are remarkable.

To mark the 250th anniversary of the death of Henry Purcell this same group of Moscow scientists performed his opera "Dido and Aeneas." It was the first performance of this opera in Russia. It was warmly received by the public and repeated several times.

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Soviet musical culture, which continues and develops the best traditions of Russian and world music art, has bright and promising prospects ahead of it.

SPORT

SPORT IN THE SOVIET UNION

IN pre-Soviet times an athletic club with 100 members was considered big, and smaller clubs were the rule, even in large cities. Sport did not receive financial support from the state, clubs depending exclusively on membership subscriptions. High school students were not permitted to join sports' clubs. Under such conditions any consideration of general athletic prowess is out of the question, although it can be recorded that certain Russian professional athletes such as the wrestlers Poddubny, Zaikin, Shemyakin, Vakhturov and Romanov, won international fame.

The Soviet system of athletic training was therefore established as a new structure on a new foundation. Physical culture and the physical culturist—these new conceptions, these new words, entered the everyday life of the peoples of the U.S.S.R. together with the Revolution.

Millions of people have been enabled to improve their health, to increase their strength, to attend to the culture of their bodies. Physical culture and sports have become the favourite pastimes of millions of young men and women.

The Government does everything possible to increase the popularity of sport and by this means to improve the health of the people and harden them physically.

In keeping with a decision of the All-Russian Central Executive Committee passed in 1923, committees for sports and physical culture were established. These committees were united by the Government Committee for Physical Culture and Sports set up in 1930. "Guidance of physical culture and sports in the U.S.S.R., training and distribution of sports cadres, the utilization of sports

structures (stadiums, clubs, grounds, swimming pools, etc.) and allocation of sports equipment will be in the hands of the Committee of Physical Culture and Sports," said the edict establishing the Committee.

There are about 100 sports societies in the Soviet Union, most of them sponsored by the trade unions. In the towns there are sports' societies and physical culture organizations at all the factories and offices, with sections in each shop or department. The trade union sports associations are directed by the Department of Physical Culture and Sports of the All-Union Central Council of Trade Unions.

Each industry has its own sports' society, membership of which is open to its workers and their families. There are the Electric, Medical, Motor, Power, Rubber, Teacher, Food Worker, Metallurgist, Wool Worker, Tractor, Builder, Locomotive and a host of other trade union sports' societies and clubs. The very names of these sports' associations indicate whom they represent. The largest is the Wings of the Soviets, the society of the aviation industry workers, followed by Torpedo, society of the automobile industry workers. Largest of the societies not sponsored by the Trade Unions are Dynamo and Spartak.

Two new athletic clubs were formed during the Second World War. They are the Smena, for junior athletes attending children's physical culture schools, of which there are about 150 throughout the country, and Trudoviye Rezervi (Labour Reserves), which unites hundreds of thousands of vocational school pupils.

In the country districts activities are carried on through groups set up at collective and State farms and at machine and tractor stations. There are also sports clubs in the Red Army, Navy and Air Force. In 1941 sports organizations in the U.S.S.R. had a membership of over four

million, 31 per cent. of whom were women. This number does not include school children or men in the armed services.

READY FOR LABOUR AND DEFENCE

An expression of the nation-wide mass nature of Soviet sports is the programme known as G.T.O.—from the initial letters of the watchword “Gotov k Trudu i Oborone”—Ready for Labour and Defence. All members of sports’ societies must undergo a course of athletic tests so as to qualify for the G.T.O. badge, which bears the figure of a runner embossed on a red five-pointed star and the slogan “Ready for Labour and Defence.” There is also a special badge for children, inscribed “Be Ready for Labour and Defence.”

The G.T.O. programme is sub-divided into three grades: one for children from 13 to 16 years of age, then the first grade for 16-year-olds and over, and, finally, the second grade with higher standards. The requirements laid down in this series of tests form the basis of the Soviet system of physical training, which aims at harmony in physical development.

The exercises differ in accordance with age and group, and are divided as follows: Speed, agility, throwing, endurance, daring, strength, defence and attack. Some items are obligatory for all groups, as for example: Running—500 metres for women and 1,000 metres for men; swimming—25 and 100 metres respectively; ski-ing—5 and 10 kilometres, overcoming an obstacle course; 15- and 25-kilometre walks; and firing a small calibre rifle.

In the “speed” group men from 16 to 30 years of age have to run 100 metres in 13.6 seconds or less, and women from 16 to 25 years must run the distance in 15.4 seconds or under. Or they may swim 50 metres, the time limit

for men being 50 seconds and for women 60 seconds. Another alternative is to cycle 500 metres in 50 seconds in the case of the men and 60 seconds in the case of the women. Yet another is to skate 50 metres, men in 60 seconds and the women in 70 seconds. For men between 30 and 40 and women between 26 and 32 the requirements are lower.

The "agility" group includes gymnastics, acrobatics, jumping, tennis, and vaulting. The "throwing" division includes throwing the hand-grenade, javelin, ball or putting the shot. The "endurance" group includes the 1,000 metre run for women and 3,000 metres for men, a 200-400 metre swim, rowing one kilometre or canoeing 2,000 metres; ski-ing 5 and 20 kilometres, skating 1,500 and 3,000 metres, cycling 10 and 20 kilometres, horse-riding over distances of 20 and 25 kilometres, hiking, football and other games.

The "daring" group includes diving from the high board and springboard, parachute jumping, ski jumps and sailing boat sports. The "strength" group includes rope and pole climbing, horizontal bar exercises, throwing bundles of hand grenades and weight-lifting.

Aspirants for the badge are tested all the year round by specially-appointed instructors, at sports grounds, aquatic sports stations and bathing beaches in the summer and at skating rinks, indoor swimming pools and ski-ing stations in the winter time.

Millions of school children, both boys and girls, adult men and women and even middle-aged people are proud bearers of the "Ready for Labour and Defence" badges. In the summer of 1945, the number of athletes holding G.T.O. badges was nearly 10,000,000.

The institution of the G.T.O. programme has played an important part in the development of athletics in the Soviet Union, raising the performance standard and em-

phasizing the great importance of sport. The programme has given rise to new popular forms of mass athletic contests, as, for instance, cross-country running in the summer and ski runs in the winter, in each of which an average of five to eight million people take part. Each factory, office, educational institution, collective farm and army unit sends its representatives to take part in the running and ski-ing events. These mass races are held annually throughout the country—in the towns, villages and the national republics. The summer cross-country races of 1944 attracted nearly 7,700,000 competitors. In the ski runs in the winter of 1943-44 the number of those taking part exceeded 6,800,000.

SPORTS IS ACCESSIBLE TO EVERYONE

The state is creating the material basis for a wide development of sports in the country. During the years of the Five-Year Plans, hundreds of sports grounds were constructed throughout the country, including the most outlying districts. Between 1921 and 1941 the state and such organizations as trade unions constructed 600 stadiums, 14,000 sports fields, more than 45,000 volley ball and basket ball courts, 6,000 ski stations and more than 500 aquatic stations.

Physical culture institutes, sports grounds, gymnasiums, swimming pools, air clubs and rifle ranges have sprung up in many cities, on collective farms, in the R.S.F.S.R., Ukraine, Byelorussia, the Transcaucasian Republics, Central Asian Republics, in Siberia and the Far East and even beyond the Arctic Circle.

In Moscow alone there are more than a dozen first-class stadiums, each with accommodation for between 10,000 and 20,000 spectators, and one stadium with stands accommodating 80,000 persons. Besides this, a stadium with a seating capacity for 150,000 spectators is now under

construction in the picturesque Izmailovo Park on the outskirts of the Soviet capital. All this is in addition to the sports grounds belonging to factories, educational establishments and clubs. Nevertheless the stadiums are still not sufficient to accommodate all of those who wish to attend sports contests.

These amenities are the property of the Soviet people, the Soviet younger generation.

Sport in the U.S.S.R. is accessible to everyone. Its organization on a mass scale is facilitated by the fact that participation is largely free of charge. There are membership dues, but they are so small—less than the fare for one trolley bus ride to the gym and back—that they are more nominal than real. Expenses connected with sports' activities are borne by the state and the trade union organizations.

The trade unions, in the main, pay for the establishment and maintenance of the sports clubs and grounds, as well as for the equipment and accessories. The trade unions also pay the salaries of the management, the instructors and the medical staff and meet all the expenses incurred by competitions and other sports promotions.

Sports organization supply sports outfits and equipment at very little cost, much below the shop price. The plants at which the prominent athletes work release them for the final training period and for the contest itself, and continue to pay them full wages. If during the training period or a contest the sportsman acquires an injury which prevents his returning to work, the insurance office pays him the equivalent of his earnings during the sick period.

Sports associations also spend large sums on improving the skill and technique of their members. The majority of the sports societies have special short term courses for sports instructors. Those who take the course are made

"public instructors," instructors who carry on their work as a social duty without payment.

The U.S.S.R. has six special colleges and nearly thirty schools for the training of specialists in physical culture. In addition there are special physical culture departments in twenty teachers' training colleges. In all these institutions tuition is free. In addition the students receive a regular monthly allowance from the state and are provided with living quarters. The budget of each of these schools and colleges—several million roubles a year—is covered by the Government.

The organization of all big sports meets in the towns—the All-Union championships' meetings and competitions, the housing and feeding of the competitors, the expenses of the judges, referees and the administrative staffs, and the renting of halls for contests are financed by the state. Mass sports holidays and performances are also held at the expense of the Government.

The U.S.S.R. budget for 1945 provided for an expenditure of 13,000 million roubles on public health and physical culture. More than 400 All-Union competitions were scheduled. Of this total 41 championships were to be sponsored by the All-Union Central Council of Trade Unions and 59 by the Dynamo, Spartak and Trudoviye Rezervi sports societies. The schedule likewise included 32 training sessions.

The sports calendar for 1945 included contests run by athletic clubs, schools, Red Army and Navy units, in cities, regions and republics.

In addition, friendly matches, between clubs, cities and military organizations, are widely encouraged. For example, in 1941 about 140,000 meetings were held in which more than 6,500,000 persons took part. Sports meetings on Olympic Games lines are held each year by the Trade Unions in Siberia, the Far East, the Urals, North Cauca-

rus, the Baltic Republics, the Transcaucasus and Central Asia. Sports festivals of the Red Army and Navy and the universities also take place from time to time.

THEY WORK AS WELL AS THEY PLAY

Soviet athletes are not professionals. They are free from the influence of promoters and managers, whose existence is inconceivable in the U.S.S.R. The Soviet athlete has no need to exchange the seconds and centimetres of his records for cash; he has no need to make money out of his football or boxing skill. The champions and rank-and-file athletes alike are workers in factory or in office, Red Army men, collective farmers or students who devote their leisure hours to sport. They are always assured of employment. Soviet sportsmen are not left high and dry when time brings their sporting career to a close. They still have their regular trade or profession to follow.

Take, for instance, Fyodor Selin, famous football centre half, who played in Mocsow and in All-U.S.S.R. football elevens for many years. He worked and studied at the Stalin Auto Plant when off the football field. Selin is over 40 years of age now and is no longer playing. He is the superintendent of the foundry department at the Stalin Auto Plant and a football coach as well. He was released for a time from his job at the request of the Torpedo sports society to whip that team into shape for the U.S.S.R. championship tournament of 1945. Fyodor Selin is back at the factory again until the beginning of the next football season.

The world famous Soviet chess player Mikhail Botvinnik is an electrical engineer and research worker.

Hero of the Soviet Union, Mikhail Gromov, who flew non-stop from the U.S.S.R. to the United States of

America over the North Pole, was at one time a champion weight-lifter.

The country honours its champions. The Government decorates them with Orders and Medals of the Soviet Union. In this country there exists the title of merited Master of Sports, bestowed on the most outstanding athletes. The coveted title is now held by 288 men and women. Two sports societies, Dynamo and Spartak, have received the Order of Lenin.

The extent to which physical culture and sports have taken root among the people is shown by the following facts.

At Kuibyshev, a large town on the Volga, a whole family, the Kochetkovs, entered for one of the numerous cross-country runs, which are so popular in the U.S.S.R. The 50-year-old mother took part in the 500-metre race with her two youngest daughters. Her eldest daughter was the winner of the 1,000 metres. Her son, a locomotive engineer's assistant, ran in the 3,000 metres. Another son, an airman, took part in the 5,000 metres. Her son-in-law was the winner in the 3,000 metres. It is interesting to note that the mother ran the 500 metres in 1 min. 50.5 secs. She trained for the race at a local stadium. The Kochetkovs have endowed a family prize for the best showing in cross-country running.

Another sporting family is Chistyakov's, the Soviet film actor who appeared in "Mother" and other well-known films. Chistyakov, formerly a prominent cyclist and hammer thrower, though already over 60, is still seen on the sports grounds. His daughters are first-class skiers and his son is a famous cyclist.

All kinds of sport are encouraged in the U.S.S.R. The most popular of them are light athletics, gymnastics, skiing, football, volley-ball, basket-ball, tennis, cycling, swimming, rowing, yachting, skating, parachute-jumping.

ice-hockey, boxing, weight-lifting, wrestling, Rugby football, horse-riding, shooting, hunting, fencing, motoring, motor cycling, motor-boat racing and mountain climbing—together over 50 kinds of sport. There are up to thirty forms of athletic contests registered in which official championships are held.

SOCCER : THE NATIONAL GAME

The Moscow Dynamo football team which visited Britain in 1945, to beat Cardiff City and the Arsenal and draw with Chelsea and the Glasgow Rangers, won the U.S.S.R. championship that year, the first decided since the summer of 1940. Dynamo dropped only four points in 22 games, winning 19 games, drawing two, and losing one. Their only defeat was sustained at the hands of the Moscow Central House of the Red Army, who finished only one point behind the Dynamos and defeated Dynamos in the final of the U.S.S.R. Cup. Following their championship win the Dynamos embarked on their history-making visit to Britain, the first Soviet sports team to visit our great allies in the war against Fascism. Central House of the Red Army, runners-up in the championship and winners of the Cup, made a successful tour of Yugoslavia, while Moscow Torpedo, third team in the final ranking in the championship, toured Bulgaria. As a result of these four tours the Soviet sides, in their first foreign tours since the end of the war, played twelve games, winning nine and drawing in the other three.

Moscow Torpedo is the sports society of the Stalin Automobile Plant in Moscow. Moscow Torpedo won the All-Union Central Council of Trade Unions' Football Cup in 1944 and 1945, 218 clubs taking part in the 1945 competition.

The U.S.S.R. championship is decided in two divisions, with 12 clubs in the first division and 18 clubs in the second

division, with promotion and relegation as in the Football League divisions in England. In 1936 the championship was decided in two sections, there being Spring and Autumn titles. The 1937 championship was decided on a full season's games, Moscow Dynamos winning by one point from Moscow Spartak and Kiev Dynamo. Moscow Spartak won in 1938 and here the Central House of the Red Army, Moscow, came on the scene to finish only two points behind. Moscow Dynamo, although well down in fifth place, were only seven points behind the winners. Spartak retained the title in 1939, and then in 1940 Moscow Dynamo came back to beat Tbilisi Dynamo by 36 points to 34. The 1945 championship table is given as a matter of interest:

	P	W	L	D	Goals		Pts
					For	Agst	
Moscow Dynamo	... 22	19	1	2	73	13	40
Central House of the Red Army, Moscow	... 22	18	1	3	69	23	39
Moscow Torpedo	... 22	12	7	3	41	21	27
Tbilisi Dynamo	... 22	9	5	8	37	22	26
Leningrad Dynamo	... 22	11	8	3	42	29	25
Leningrad Zenith	... 22	8	7	7	35	31	23
Stalingrad Tractor	... 22	9	10	3	23	38	21
Moscow Krylya Sovetov	... 22	6	10	6	23	43	18
Minsk Dynamo	... 22	5	10	7	20	39	17
Moscow Spartak	... 22	6	13	3	22	44	15
Kiev Dynamo	... 22	1	15	6	13	50	8
Moscow Locomotiv	... 22	1	18	3	14	54	5

Hundreds of thousands of people attend the football matches for the U.S.S.R. Championship and U.S.S.R. Cup, played off in various parts of the country. Football has become the national pastime of the Soviet Union. Moscow alone has over a hundred thousand organized football players. The Dynamo Stadium in Moscow with its 80,000 seats is now too small for football fans. Very often the grounds are packed even during week-day matches.

For major games there are generally five times as many desiring to get in as the Dynamo stadium can hold, while during international games, the number exceeds half-a-million. The only consolation of those who have to turn back from the gates is to follow the game over the radio.

In the year preceding the war Soviet football teams played a number of times against foreign teams at home and abroad. They won most of the matches with teams from Bulgaria, Czechoslovakia, Turkey, France, Spain and Norway. These matches showed the high standard of Soviet football.

It is interesting to note that most of the football teams which compete in the U.S.S.R. championship and Cup tournaments represent the trade union sports associations. Teams entered include Moscow Torpedo (Automobile Workers' Union), Stalingrad Tractor (Tractor Workers' Union), Moscow Locomotiv (Railwaymen's Union), Krylya Sovetov (Wings of the Soviets), (the Aircraft Workers' Union), and other trade unions.

HALF-MILLION RUNNERS, JUMPERS AND THROWERS

The number of people who take part in track and field athletics regularly exceeds half a million. At present, sports organizations are devoting considerable attention to athletics in a drive to improve records in this field of sport. Good progress was made in this respect in 1945.

Among the outstanding Soviet achievements in the field of light athletics, first mention should be Nina Dumbadze's discus throw of 49.88 metres (163 ft. 7½ ins.), which is five feet better than the official world record for women. This year saw two more world records shattered by Soviet women, in the javelin throw and shot put. Ludmilla Anokhina registered 48.89 metres (158 ft. 9½ in.) in the

Javelin throw; Tatyana Sevryukova heaved the shot a distance of 14.89 metres (158 ft. 9½ in.) in the javelin throw; Tatyana Sevryukova heaved the shot a distance of 14.89 metres (48 ft. 10½ in.). Another notable performance was the 20-km. run by Feodosi Vanin, of Moscow, who clipped nine seconds from the world record. Three world track records are in the hands of the Moscow woman athlete Yevdokia Vasilyeva; the best is her time of 2 min. 12 secs. for 800 metres.

The following are the principal All-Union records in track and field athletics.

TRACK AND FIELD RECORDS (MEN)

Metres	Min.	Sec.	Holder	Where Made	Year
100		10.6	P. Golovkin	Moscow	1940
200		21.6	R. Lulko	Leningrad	1936
400		48.6	R. Lulko	Leningrad	1935
800	1	52.4	A. Pugachevsky	Moscow	1944
1,000	2	25.7	A. Pugachevsky	Moscow	1944
1,500	3	53.2	A. Pugachevsky	Moscow	1944
2,000	5	22.0	S. Arzhevalsky	Moscow	1945
3,000	8	25.8	S. Arzhevalsky	Moscow	1945
5,000	14	37.0	S. Znamensky	Moscow	1940
10,000	30	35.2	F. Vanin	Moscow	1942
15,000	48	00.6	F. Vanin	Moscow	1943
20,000	63	51.0	F. Vanin	Moscow	1943
Hour	18km	779m	F. Vanin	Moscow	1943
(11 mls. 522 yds.)					

Walking

3,000	12	1.0	I. Shkodin	Smolensk	1941
5,000	20	51.0	I. Shkodin	Smolensk	1941
10,000	46	58.6	A. Kruklin	Latvia	1945
20,000	1h 39	58.2	A. Kruklin	Latvia	1945

Relays

4 x	100	1	42.2	All-Leningrad	Leningrad	1936
4 x	200	1	30.0	All-Moscow	Moscow	1945
4 x	400	3	22.2	All-Moscow	Moscow	1940

4 x 800	7	46.8	All-Moscow	Moscow	1945
4 x 1500	16	8.4	All-Moscow	Moscow	1945

Hurdling

110	14.6	I. Stepanchanok	Moscow	1940
200	25.5	D. Yonov	Moscow	1937
400	55.1	N. Mityanin	Kazan	1940

Steeplechase

3,000	9	18.0	P. Stepanov	Moscow	1944
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Jumping

	ft.	ins.			
High jump	6	4 $\frac{1}{2}$	G. Atanelov	Tbilisi	1936
Long jump	24	6 $\frac{3}{4}$	S. Kuznetsov	Moscow	1945
Hop, Step and Jump	49	11 $\frac{1}{2}$	B. Zambrebortz	Moscow	1944
Pole vault	14	1 $\frac{3}{4}$	N. Ozolin	Moscow	1939

Throwing

Shot	50	11 $\frac{3}{4}$	A. Kanaki	Kiev	1938
Hammer	176	6 $\frac{1}{2}$	J. Kotkas	Esthonia	1943
Discus	166	5 $\frac{3}{8}$	S. Lyakhov	Ashkhabad	1939
Javelin	228	6 $\frac{1}{2}$	V. Alexeyev	Leningrad	1939
Grenade	288	4 $\frac{1}{2}$	L. Antipyev	Gorky	1937

WOMEN

Metres	Min.	Sec.			
60		7.5	M. Shamanova	Moscow	1936
100		12.0	E. Sechenova	Moscow	1944
200		25.2	E. Sechenova	Moscow	1939
400		57.7	V. Pizhurina	Kiev	1938
800	2	12.0	E. Vasilyeva	Moscow	1943
1,000	2	52.6	E. Vasilyeva	Moscow	1944
1,500	4	38.0	E. Vasilyeva	Moscow	1944

Relays

4 x 100		49.4	All-Leningrad	Leningrad	1936
4 x 200	1	45.0	All-Moscow	Moscow	1944
8 x 800	6	57.4	Krylya Sovetov, Moscow	Moscow	1944

		Hurdling			
80	11.6	M. Barylova	Moscow	1944	
		Jumping			
High Jump					
	ft. ins.				
	5 29-16	G. Ganeker	Baku	1945	
Long Jump	19 0 $\frac{1}{2}$	G. Turova	Leningrad	1934	
		Throwing			
Shot	48 10 $\frac{1}{2}$	T. Sevryukova	Erevan	1945	
Discus	163 7 $\frac{3}{4}$	N. Dumbadze	Tbilisi	1944	
Javelin	158 9 $\frac{1}{8}$	L. Anokina	Leningrad	1945	
Ball	169 11 $\frac{3}{4}$	Z. Sinitskaya	Kharkov	1938	
Grenade	168 8	K. Lapteva	Moscow	1937	

WHERE SOVIET ATHLETES ARE SUPREME

During the past 10 years Soviet athletes have created 49 world records. The biggest number is to the credit of the weight-lifters who have bettered 26 of the 35 registered world records. Weight-lifting attracted a relatively small number of athletes before the war, altogether 30,000.

However, this sport had a following in every republic of the U.S.S.R., with the result that there are Russians, Ukrainians, Byelorussians, Jews, Armenians, Tatars and other nationalities in the list of top-ranking Soviet weight-lifters holding U.S.S.R. and world records.

The name of Grigori Novak, the phenomenal weight-lifter who performs in the middle-weight and light heavy-weight classes, appeared more often in the Soviet press during the war than any other athlete. During the past seven years he has broken world records on thirty occasions. In 1944 Novak established thirteen records and six more records in the first half of 1945.

Georgi Popov is an outstanding weight-lifter, as is Ivan Maltsev, a Black Sea sailor, who established three world records in three different weight divisions in the course

of a single year. Hardly a weight-lifting meeting is held without a regional, republican, U.S.S.R. or world record being broken.

WEIGHT-LIFTING RECORDS

Two-Hand Clean-and-Press

Class	Record (lbs.)	Holder	Where made	Year
Bantam	205.1	A. Mamedon	Baku	1945
Feather	227.4	M. Kasyanik	Tbilisi	1940
Light	243.1	I. Mekhanik	Moscow	1940
Middle	285.4	G. Novak	Moscow	1945
Lt.-heavy	293.2	G. Novak	Moscow	1945
Heavy	299.9	S. Ambartsumyan	Erevan	1938

Two-Hand Snatch

Bantam	214.5	M. Kosarev	Moscow	1939
Feather	238.6	G. Popov	Kiev	1939
Light	259.0	N. Shatov	Moscow	1940
Middle	261.1	G. Novak	Moscow	1944
Lt.-heavy	278.8	G. Novak	Moscow	1945
Heavy	292.9	S. Ambartsumyan	Erevan	1940

Two-Hand Clean-and-Jerk

Bantam	277.5	M. Kosarev	Leningrad	1945
Feather	299.8	G. Popov	Kiev	1937
Light	321.2	N. Shatov	Moscow	1940
Middle	345.0	G. Novak	Moscow	1945
Lt.-heavy	359.3	G. Novak	Moscow	1946
Heavy	376.9	Y. Kutsenko	Kiev	1939

Two-Hand Total

Bantam	677.9	M. Kosarev	Moscow	1939
Feather	733.0	G. Popov	Kiev	1939
Light	804.6	N. Shatov	Leningrad	1938
Middle	881.8	G. Novak	Kiev	1941
Lt.-heavy	412.5	G. Novak	Moscow	1945
Heavy	955.6	S. Ambartsumyan	Erevan	1938

Right-Hand Snatch

Bantam	147.2	L. Korchilov	Leningrad	1939
Feather	160.7	G. Popov	Kiev	1937

Light	188.7	G. Popov	Kiev	1941
Middle	187.9	V. Krylov	Moscow	1940
Lt.-heavy	193.1	R. Manukyan	Erevan	1940
Heavy	205.0	I. Beniat	Moscow	1937

Left-Hand Snatch

Bantam	150.4	I. Donskoi	Kiev	1936
Feather	170.8	G. Popov	Kiev	1935
Light	192.2	I. Mekhanik	Moscow	1944
Middle	202.8	V. Krylov	Moscow	1940
Lt.-heavy	211.3	R. Manukyan	Erevan	1940
Heavy	220.4	S. Ambartsumyan	Erevan	1940

Right-Hand Clean-and-Jerk

Bantam	183.3	V. Kustov	Leningrad	1938
Feather	205.2	G. Popov	Kiev	1939
Light	238.6	A. Zhizhin	Leningrad	1940
Middle	234.3	K. Mileyev	Minsk	1939
Lt.-heavy	242.7	S. Lyapidevsky	Minsk	1943
Heavy	252.0	P. Kutsenko	Kiev	1938

Left-Hand Clean-and-Jerk

Bantam	160.7	I. Maximov	Leningrad	1940
Feather	189.4	A. Zhizhin	Leningrad	1936
Light	213.0	A. Zhizhin	Leningrad	1940
Middle	236.4	A. Maltsev	Sevastopol	1940
Lt.-heavy	239.1	A. Maltsev	Sevastopol	1940
Heavy	242.5	A. Maltsev	Sevastopol	1940

BOXING'S RAPID DEVELOPMENT

Russian athletes first became acquainted with boxing in 1910 when a news reel of the world heavyweight championship fight between Jim Jeffries and Jack Johnson was shown in St. Petersburg. True, a boxing match had been staged before that between a French professional and a Russian amateur. There were also a few Englishmen working in Russia who boxed with Russians, but such contests were rare.

It was only after the First World war that boxing made any progress. Small boxing clubs were formed in St. Petersburg, Moscow, Kiev, Kharkov and other cities. Boxing competitions were conducted in Moscow and St. Petersburg, but the number of competitions was small.

Boxing was introduced on a large scale only after the October Revolution. Moscow and Leningrad each had several large boxing clubs. Enthusiasts started to study text-books on boxing and read athletic journals giving them ideas on training and ring tactics. Of considerable aid was the full-length film of the Dempsey-Carpentier fight, which shows the champions in training as well as the fight itself. Then Kharlampiev, a Russian boxer who had fought abroad, returned to Moscow to train Soviet boxers. A French boxer, Lustallo, did the same thing in Leningrad.

More and more young men took up boxing and the sport developed rapidly. A schedule of boxing competitions was worked out. The first U.S.S.R. championship meeting was held in 1926 and from that time on one was staged every year. Twenty-one boxers entered in 1926 and twice that number the following year. Boxing spread from city to city, producing many promising fighters. Leningrad, the traditional sporting rival of Moscow, created its own school.

Tbilisi, capital of Georgia, sent a team to Moscow and scored a sensational victory over the Muscovits. Boxing gradually spread throughout the Ukraine and other republics. Young champions started to train their friends and thus acquired experience as boxing teachers. The number of boxing instructors grew from year to year.

As a result of all these activities, boxing clubs were functioning in 150 cities of the country shortly before the present war broke out. The number of registered boxers at this time reached 18,000. The rural areas also had their boxing contests, the sport being introduced by men return-

ing from the Red Army and Red Navy, where boxing occupied a prominent place.

Boxing meetings were held every year between sports' societies, cities districts, territories and republics. The Red Army and Red Navy and the trade unions staged their own championships. In the year immediately preceding the war, boxing was widely developed among junior sportsmen and national title meetings were arranged for them as well.

Of course, the development of boxing did not proceed as smoothly as it would seem from this story. Mistakes were made, but the fact that boxing as every other sport in the U.S.S.R. was regarded as a means of physical training for the masses and not as an aim in itself, helped to overcome all obstacles and enabled it to reach its present stage.

The development of boxing was not only quantitative. Soviet boxers attained high fighting qualities, which proved themselves in international matches. Soviet boxers met teams from Norway, Sweden, Finland, Switzerland, Turkey, Germany, England, Belgium, Czechoslovakia, and France, and won most of the matches. Particularly outstanding was the victory scored over the French team which included Despot, the middleweight winner at the 1936 Olympic Games and a welterweight, Triz, 1936 Olympic Games runner-up at his weight.

SWIMMING RECORDS AND THE RECORD-BREAKERS

The story of Soviet swimming is largely the story of the great rivalry of Semyon Boichenko, former Black Sea sailor, and the younger Leonid Meshkov, who hails from Stalingrad. Meshkov attended the International Youth Conference in London in 1945 as a Soviet delegate and swam regularly at the Marshall Street Baths, where his redstarred skull cap and his tremendously powerful "butter-

fly" breast-stroke created great interest. It was Boichenko, however, who first used the "butterfly" stroke in the Soviet Union. In the light of Meshkov's war record his story is well worth recounting.

At the Volga regional Olympic games in 1935 a young Stalingrad workman named Meshkov set up an all-union record. A fortnight later he was swimming in Moscow. Meshkov set up another record. The Volga youth found his place at once in the leading ranks of Soviet athletes. In due course he entered the Leningrad Institute of Physical Culture as a student.

During the same period another talented swimmer, Simeon Boichenko appeared in Moscow. Boichenko and Meshkov eventually met in the water. This was the first encounter in what turned into a long, brilliant, and vehement rivalry which has continued to this day. Every race in which the two swimmers participated became a sporting event of the highest importance. During the struggle for supremacy between them Meshkov established many new records.

Before the war began Meshkov was already a champion, who had set up a whole series of world records. He was unique in being an outstanding exponent of two very different styles, the breast stroke and the crawl. Of the two he much preferred the crawl.

Then the war began. Meshkov volunteered for the army.

Bidding farewell to the blue and white tiled swimming baths, the foaming water and the applause from the galleries, he settled down to the rough, hard, humdrum life of the soldier, with his usual doggedness and devotion to work. In one action he was severely wounded and taken to hospital.

The swimming champion's wounds affected both arms; the right shoulder was badly shattered, and the nerves which controlled the movements of the left hand were

damaged. The left hand itself was as stiff as a piece of wood. Meshkov was in hospital for six months before he was finally discharged. Both arms hung useless from the shoulder down, the muscles had shrunk and had lost all their strength and elasticity.

His friends remarked: "That's the end of Meshkov. What a pity!" Somewhere in the distance lay the swimming pool, with the swimmers, the shouts of applause from the galleries. And then silence. Meshkov walked along the streets alone—homewards.

Then he started work. Every morning he began to teach his arms to live, taught them the movements as if they were the arms of a child. Calmly and methodically he began his daily practice. In the swimming baths they were asking: "Is it possible for a man to race again after wounds like that?" Meshkov would stand in the middle of his room stretching and flexing his arms, practising the rotatory movements of the swimmer. Slowly he felt his strength returning, little by little his muscles seemed to be regaining their former elasticity. Of course this may have been only his imagination, and visitors would warn him: "Mind you don't strain yourself, Meshkov." But still he went on, stretching and flexing his arms...

At length the day arrived when he entered the baths again. He stripped and got into the familiar greenish water, with a feeling not so much of excitement as of happiness, like returning to the old family home. He resumed his training with the assiduity of a student. Every day he felt his muscles strengthen, his arms regain their flexibility. Like all great athletes, he had the will to win, but after his wounds his will had been tempered by the fight for life itself.

And so he stands on the blue tiles of the bath again—a champion, in all the brilliance of youth and strength.

Not so long ago he met Boichenko again, and their struggle for supremacy was renewed with all its former brilliance. Meshkov finished first, and his time was one second better than the official world record. During his career Meshkov has improved on over 60 All-Union and world records. At the moment he is again in great form, and the timekeepers steadily return record times for his performances.

Meshkov has won many great victories in his time, but his greatest victory was won over faint-heartedness, over despair, over weakness. He won this remarkable victory over himself, and came back to his career and vocation.

The following list of records will give a clear indication of the rapid advances made by Soviet swimmers.

SWIMMING RECORDS

MEN

Free Style

Metres	Mins.	Secs.	Holder	Where made	Year
100		57.0	V. Uzhakov	Moscow	1941
200	2	8.9	L. Meshkov	Leningrad	1945
300	3	26.5	L. Meshkov	Leningrad	1941
400	4	44.9	V. Uzhakov	Leningrad	1945
500	6	9.2	V. Uzhakov	Moscow	1945
800	10	50.7	V. Kitayev	Leningrad	1940
1,000	13	41.9	V. Kazakov	Leningrad	1938
1,500	19	56.1	P. Golubov	Moscow	1941

Relays

4 x 50	1	45.6	All-U.S.S.R.	Moscow	1941
4 x 100	3	56.6	All-U.S.S.R.	Moscow	1941
4 x 200	9	39.4	All-Leningrad	Leningrad	1941

Breast Stroke

100	1	5.4	S. Boichenko	Moscow	1941
200	2	29.8	S. Boichenko	Moscow	1941
400	5	38.4	L. Meshkov	Leningrad	1941
500	7	10.6	L. Meshkov	Leningrad	1941

Relays					
4 x 100	4	42.4	All U.S.S.R.	Moscow	1941
4 x 200	11	28.8	All U.S.S.R.	Moscow	1939

Back Stroke					
100	1	9.2	E. Belkovsky	Leningrad	1941
200	2	31.7	E. Belkovsky	Leningrad	1940
400	5	21.0	E. Belkovsky	Leningrad	1940

WOMEN

Free Style					
100	1	8.2	J. Kotchetkova	Moscow	1941
200	2	36.9	J. Kotchetkova	Moscow	1941
300	4	8.7	K. Vasilyeva	Erevan	1945
400	5	40.6	K. Vasilyeva	Erevan	1945
500	7	23.2	Z. Sheleshneva	Moscow	1944
800	12	4.0	Z. Sheleshneva	Moscow	1945
1,000	15	8.8	Z. Sheleshneva	Moscow	1945
1,500	22	54.6	Z. Sheleshneva	Moscow	1945

Relays					
4 x 50	2	8.9	All-U.S.S.R.	Moscow	1941
4 x 100	4	51.1	All-U.S.S.R.	Moscow	1941

Breast Stroke					
100	1	22.1	M. Sokolova	Moscow	1939
200	3	1.8	M. Sokolova	Moscow	1939
400	6	26.8	Z. Sheleshneva	Moscow	1941
500	8	5.1	Z. Sheleshneva	Moscow	1941

Relay					
4 x 100	5	46.0	All-U.S.S.R.	Moscow	1941

Back Stroke					
100	1	17.7	J. Kotchetkova	Moscow	1941
200	2	47.4	J. Kotchetkova	Moscow	1941
400	5	56.6	K. Aleshina	Leningrad	1941

Not so long ago he met Boichenko again, and their struggle for supremacy was renewed with all its former brilliance. Meshkov finished first, and his time was one second better than the official world record. During his career Meshkov has improved on over 60 All-Union and world records. At the moment he is again in great form, and the timekeepers steadily return record times for his performances.

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1,000	13	41.9	V. Kazakov	Leningrad	1938
1,500	19	56.1	P. Golubov	Moscow	1941

Relays

4 x 50	1	45.6	All-U.S.S.R.	Moscow	1941
4 x 100	3	56.6	All-U.S.S.R.	Moscow	1941
4 x 200	9	39.4	All-Leningrad	Leningrad	1941

Breast Stroke

100	1	5.4	S. Boichenko	Moscow	1941
200	2	29.8	S. Boichenko	Moscow	1941
400	5	88.4	L. Meshkov	Leningrad	1941
500	7	10.6	L. Meshkov	Leningrad	1941

Relays

4 x 100	4	42.4	All U.S.S.R.	Moscow	1941
4 x 200	11	28.8	All U.S.S.R.	Moscow	1939

Back Stroke

100	1	9.2	E. Belkovsky	Leningrad	1941
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Relay

4 x 100	5	46.0	All-U.S.S.R.	Moscow	1941
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Back Stroke

100	1	17.7	J. Kotchetkova	Moscow	1941
200	2	47.4	J. Kotchetkova	Moscow	1941
400	5	56.6	K. Aleshina	Leningrad	1941

Motor Paced					
5,000	4	50.2	M. Pushkin	Tula	1945
10,000	9	49.0	M. Pushkin	Tula	1945
15,000	14	35.6	M. Pushkin	Tula	1945
20,000	19	48.0	M. Pushkin	Tula	1945
25,000	24	25.0	M. Pushkin	Tula	1945

Team Racing					
5,000	6	23.2	All-Moscow	Tula	1945
7,500	9	54.0	All-Moscow	Moscow	1935
10,000	18	25.1	All-Moscow	Moscow	1938

WOMEN

Standing Start					
500		40.6	A. Shtakhanov- skaya	Leningrad	1940
1,000	1	22.9	M. Valovova	Gorky	1945
2,000	8	6.5	A. Zubkova	Tula	1945
3,000	4	42.9	A. Zubkova	Tula	1945
5,000	7	46.4	A. Zubkova	Tula	1945
10,000	15	58.6	A. Zubkova	Tula	1945
15,000	23	57.5	A. Zubkova	Leningrad	1945
20,000	31	58.6	A. Zubkova	Leningrad	1945
25,000	41	7.7	A. Zubkova	Tula	1945

Flying Start					
200		13.7	A. Shtakhanov- Skaya	Leningrad	1940
500		36.1	A. Shtakhanov- Skaya	Leningrad	1940
1,000	1	19.5	M. Valovova	Gorky	1936

Team Racing					
3,000	4	23.6	Dynamo Sports Society	Tula	1945
5,000	7	17.1	All-Moscow	Moscow	1944

Much attention is paid to endurance contests. Soviet sportsmen have made many notable long-distance performances. Here are a few of the most outstanding. Five

railwaymen skied 8,200 km. from Ancharsk (Siberia) to Murmansk in five months. Five cyclists starting from Kiev, rode clean across the country from west to east and back, a distance of 30,872 km. in 268 days. Thirty-two Turkmenian collective farmers rode on horseback 4,300 kilometres, part of this distance across the Kara-Kum Desert. Six young Leningrad factory workers walked to Khabarovsk in the Far East, all of 9,000 kilometres. Women employees of the Moscow Electrical Equipment Works skied from Moscow to Tobolsk, a distance exceeding 2,000 kilometres.

Long-distance swimming records have also been established in the Soviet Union. In 1935, Nikolai Malin, of Moscow, swam 50 kilometres in the Black Sea near Sochi, a famous health resort, covering the distance in 17 hrs. 54 mins. and 20 secs.

Swimming in the same district the following year Vladimir Kuznetsov, also of Moscow, covered 59.4 kilometres in 28 hrs. and 40 mins. Swimming in the Women's Black Sea 20-kilometre race in 1937, Yevgenia Vtorova, one of three sisters, covered this distance in 7 hrs. 18 mins. and 8 secs. Her sister, Lyubov, finished 84 minutes behind. During the war, in August, 1943, Captain Faizulin swam 25 kilometres in the Moscow River, covering the distance in eight hours.

HORSE RACING AND BREEDING

Horse racing is an important feature of all sports festivals of the Transcaucasus and the Central Asian republics. It is a favourite sport of young and old alike.

During the war the famous Khrenov Stud Farm was transported to the Urals. The stables, now back in their old quarters in Orel, have 187 breeding mares, among them such valuable Russian racer breeds as Pertsovka, Arcticá, Pompa and Hortense; the first class mare Murava,

which has dropped 16 foals, among them such fine racers as Mokh (2.06) and Murashka (2.15).

The stable's sires enable the management to pursue the same breeding lines that it followed before the war. Among the champion sires are Ulov and Kukol, of the Lovchi-Gromadny line; Volbot and Burlivi, of the Bar-chuk line; Kremen of the Zenita line; Posol of the Voina line; and Kishinev of the Varinika line.

The 1944 breeding season was successful; 72 per cent. of the pairing producing results, the foals surviving in every case. Forty-five two-year-olds are being trained at the farm, and the majority of the three-year-olds are in training at the Moscow Hippodrome.

The whole staff of the stables worked to provide the herd with fodder and winter quarters. In a very short time, much was done to restore the ruined buildings, and all 350 thoroughbreds were provided with warm, light stables. Eight wells were put into condition and two new ones dug, and the electric lighting was got going again.

There is plenty of hay and every horse is given its oats and oil cake daily. The herd is healthy and in fine fettle.

The staff of the farm realise their responsibility to the country and the Red Army and they are working hard from specialists down to stable hands to fully restore the farm as quickly as is humanly possible.

It was no easy task to move such a stud farm as Khrenov, and the staff went of work one terrible day in 1942 with heavy hearts. However, all the necessary preparations had to be made literally in a single day. Gritz, the Director, and Chernishov, the head veterinary surgeon, took charge and made all arrangements. There was not a man among them who did not feel responsible for the care of the horses on the trip. Three months after leaving the farm they reached Krasny Kut in the Stalingrad region; and from there the herd was sent on to the Kurgan region by train.

Leading the horses at a point so near the front lines was no easy task, either. However, all the difficulties were finally surmounted and the herd was got to Kurgan without mishap.

I. Bobrinev has worked at the farm for 56 years. In addition to his other duties, he has kept a detailed record of every horse and can give information on any horse that has ever been in the stables. Khalnov is another man that has worked at the farm for over half a century. He has a phenomenal memory, remembers the qualities of every horse and its genealogy, and is the director's first assistant when it comes to pairing. Both Petrov and Pashchenko are first class trainers of colts, and both have many long years of experience behind them. In his 45 years at the stud farm, Pashchenko has trained over 4,500 horses. These old workers are indefatigable in teaching the younger ones patience, staunchness, ability to recognise the slightest peculiarity in the behaviour and character of a horse, firmness combined with understanding and kindness, and a love for their work.

Many women went to work at the stables during the war, taking the places of their fathers, husbands and brothers who went to the front. Many of them proved apt pupils in the difficult work of a groom, although work in a stud farm has always been considered a man's job. Olga Kolycheva and Zhenya Kuzmina are two fine grooms, and they are studying to be jockeys at the riding school recently opened.

The farm staff are fully aware of the difficult job they have before them if they are to restore the farm to what it was in the days when its fame had spread all over the country, when they were able to show at the All-Union Agricultural Exhibition and the farm was visited by numerous tourists every year. But the groundwork has

been laid, and the thoroughbred herd has survived the worst.

In two years the farm plans to get its breeding mares back to pre-war level, and will be in a position to breed the same number of thoroughbreds that it produced prior to the outbreak of the war.

RIFLE SHOOTING

Rifle shooting became extremely popular with the introduction of the (I.T.O. (Prepared for Labour and Defence) badge tests, in which rifle-shooting was one of the main tests. Another badge is awarded for good marksmanship.

Before the war there were nearly 400,000 people participating in small-bore shooting contests conducted annually throughout the country. Of these, 88,000 were women. Nearly 105,000 came from the rural districts alone. This form of sport was also popular among juniors; numerous rifle-shooting circles were set up in Soviet schools, which produced many outstanding sharpshooters.

Soviet small-bore riflemen took part in four contests held under the auspices of the Society of Miniature Rifle Clubs before the war, and came out on top each time.

In 1988, 205 teams of five members each competed, the U.S.S.R. teams taking the first six places, whilst in the last contest in 1989, 206 teams representing 19 countries competed. The U.S.S.R. entered 44 teams and took first and second places, the Central Club of the Osoaviakhim (Society for the Defence of the Soviet Union and for the Development of its Aviation and Chemical Industries), and the Moscow Institute of Pedagogues. The Osoaviakhim team registered a total of 1,991 points out of a possible 2,000 for a new world record, and the Institute team 1,988 points. The former world record of 1,987 points was made by the Border Legion Minnesota U.S.A. team in 1986.

Incidentally, this is not the only world record that has been improved by Soviet small-bore riflemen. In the kneeling position Ivan Andreyev scored 397 points out of a possible 400, beating the official world record by eight points. Dmitri Ivanov 400 points out of a possible 400 in the prone position. The former world record in this event was 398 points. Andreyev exceeded the world record of 1,158 points for all three positions (standing, kneeling and lying): his best achievement being 1,165 points out of a possible 1,200. All these records were established at 50 metres.

Nikolai Titov scored 290 points out of a possible 300 at 100 metres from the prone position, beating the former world record of 297 points. His total for the 100 metre and 200 metre contests was 588 points, 14 points better than the official world record. Alexai Viktorov added another world record to the ever-growing list of Soviet achievements in small-bore rifle-shooting contests, 290 points out of a possible 300 in the 200 metre trial in the prone position. Finally, Alexander Pyzhov scored 198 points out of a possible 200 over 100 metres in the prone position, one point over the official world record.

Soviet sharpshooters were also successful in pistol contests—standing at 25 metres. Vladimir Odnolstkov registered 288 points out of a possible 300, beating the world's official record by four points.

Readers will be interested in having an idea of the extent of rifle-shooting in the Soviet Union before the war.

Small-bore contests, conducted in 1940 in Ordjonikidze territory alone, attracted 10,000 competitors. At the U.S.S.R. championships of the Dynamo Sports Society, which took place the same year, two Soviet individual and four team records were broken. Fourteen teams participated in the championships contest arranged by the Spartak Sports Society, and approximately 88,000 competed in

mass contests conducted by the same society. A number of regional and republican contests was also organized in 1940.

The small-bore schedule included special contests for women athletes, who attained very high results. In one held in Nalchik, Nina Ashikhmina scored 50 points out of a possible 50. In Batumi, Anush Shishmanyan registered 47 points out of a possible 50 over a distance of 50 metres.

In a similar event staged in Rostov, in which 70 women competed, Maria Klubok ran up a total of 46 points. As many as 136 champion sharpshooters took part in the national contests for snipers, held in 1940 by the Osoviakhim.

One of the biggest events of the year for Soviet rifle-shooting enthusiasts before the war was the traditional Rifleman's Holiday, celebrated annually on a Sunday in July. On this day thousands of men, women and school children demonstrate their skill in marksmanship in different cities and rural districts of the country.

Peace-time activities in the field of rifle-shooting sport played a big role in developing snipers for the Red Army during the war.

ENCOURAGEMENT FOR EVERY SPORT

Every encouragement is given to the development of "lelo" (resembling Rugby football), "kuresh" (wrestling) and hosts of other games and sports enjoyed for many years in the non-Russian republics of the U.S.S.R.

Before the Revolution, mountain-climbing in Russia, with so many mighty peaks on her territory, was practically non-existent. From 1820 to 1914, nearly a century, only 59 persons climbed Elbrus, the highest mountain in Europe, and 47 of them were foreigners. Between 1877 and 1903, Russian mountain climbers did not make a single

first ascent. Those that were made were accomplished by foreigners.

Touring and mountain-climbing are now widely developed in the U.S.S.R. Soviet mountaineers have raised their flag on some of the highest summits of Asia and Europe. In 1937, twelve leading Soviet mountain climbers scaled peaks of over 22,000 feet. The lofty Lenin and Stalin Peaks have been conquered on a number of occasions.

In groups of several hundred persons, collective farmers, students and Red Army men climb Mount Elbrus in the Caucasus and the majestic Mount Kazbek. Before the war scores of camps were set up in the Caucasus, Altai and Tien-Shan in which thousands of persons studied the art of mountain climbing. So great is the enthusiasm for this sport that in 1938 there were 20,000 mountaineers in the U.S.S.R.

In August, 1945, Guards Leut-Colonel Nabi Amintayev made parachute jumping history when he hurtled down in a delayed-opening drop from a height of over 10 km to within 600 metres of the ground before opening his parachute. Soon afterwards another Red Army officer, Romanyuk, beat Amintayev's record. Baling out from a plane flying in the stratosphere, Romanyuk fell more than 12,000 metres before opening his chute 800 metres from the ground.

SOVIET SPORTSMEN IN WARTIME

Soviet sportsmen were among the first to enlist in the war against the German fascists. Many of them saw action with guerrilla detachments. Nearly the entire Leningrad Institute of Physical Culture joined a partisan detachment. A number of them have been decorated, several having earned the title of Hero of the Soviet Union. One of the latter is the well-known long distance runner,

Nikolai Kopylov, who became a Colonel in the army. He led a tank unit that took part in the Battle of Stalingrad, saw action on many sectors of the front and fought its way to Berlin. Another is the Moscow sportsman Gleb Baklanov, who began the war as a Captain and ended it as a Major General.

Among the intrepid guerrilla fighters was absolute boxing champion of the U.S.S.R. Nikolai Korolyov, the well-known light athlete Georgi Yermolayev, the weight-lifter Nikolai Shatov and the mountain climber Evgeny Ivanov. Ivanov alone engineered seven German train wrecks.

During the war the sports organisations trained Red Army reserves—skiers, grenade-throwers, motor-cyclists, bayonet fighters and swimmers. All prominent athletes received special instruction and afterwards conducted many classes in bayonet fighting, swimming and skiing. During the war, too, 862,000 civilians were taught to swim, and 1,664,000 the art of bayonet fencing. The Leningrad swimmer Vladimir Kitayev, who recently celebrated his 20th anniversary as a competitor in official swimming meetings, taught 7,000 men the art of bayonet fighting. The Moscow skier Vladimir Serebryakov trained more than 10,000 Red Army skiers.

The Spartak sports society sent its instructors to the firing lines to train skiers. Soviet athletes also did their bit at army hospitals where they conducted classes in restorative gymnastics. Hundreds of wounded soldiers owe their speedy recovery to the daily exercises led by these athletes.

The physical training they received in pre-war years stood the Soviet athletes in the army and guerrilla detachments in good stead. Igor Bulochkin, a champion skier, was a bomber navigator. When he and his wounded pilot were forced to bale out on enemy-held territory one day,

Bulochkin carried his comrade for a week until they both reached the Soviet lines. Nikolai Korolyov saved his wounded guerrilla commander in the same way.

But the Soviet athletes did not confine their activities to fighting. While the battle was in progress in December, 1941, on the approaches to Moscow, skaters held races on an ice-covered pond in the Soviet capital.

Several world records were established during the war. For instance, Feodosi Vanin ran 20 kilometres in the new record time of 1 hr. 3 mins. 51 secs. This record breaking performance took place in the autumn of the second year of the war. Yevdokin Vasilyeva ran 800 metres in 2 mins. 12 secs. to chalk up a new world record. In 1944 Nina Dumbadze tossed the discus for a distance of 49 metres 88 centimetres and Vasilyeva registered two more women's world records, running 1,000 metres in 2 mins. 52.7 secs, and 1,500 metres in 4 mins. 38 secs. In all 80 new records were established during the war years, 31 of which were better than the official world records.

SPORT MAKES ITS COME-BACK

Sports activities are reviving rapidly in the liberated areas. The athletes themselves are taking an active part in rebuilding stadiums, gymnasiums, ski stations and other structures wrecked by the Nazi invaders. Restored and functioning to-day in the Kalinin Region, for example, are seven stadiums, 487 athletic fields, 31 gym halls and four aquatic stations. As many as 1,962 sports groups have been organized with a total membership of 85,000 athletes. More than half of these sports groups have been formed in the rural areas.

Last winter the athletes of the Kalinin Region took part in special ski runs arranged for collective farms youth, ski races sponsored by the trade unions and youth organizations and the regional skiing championships. A separate

ski meet was held for school children in which juvenile athletes of 18 towns participated.

Sports clubs have been set up in Kalinin and Kimry for school children and more clubs of this type will be opened in other towns of the Kalinin Region.

Leningrad is also making good progress in the rebuilding of 15 city stadiums, 27 athletic grounds, two gym halls and the local yacht club.

Yartsevo is a small town in the Smolensk Region. The Germans practically levelled it to the ground. We now hear of the Yartsevo sportsmen building a stadium with a football pitch, volley ball courts and a cinder track.

Berdsk in Novosibirsk Region is still smaller, but the local athletes have built a stadium with a football pitch, volley-ball and basket-ball courts, a cinder track and a separate field for gymnastics.

Shortly before the outbreak of the war the athletes of Tashkent in Central Asia built an artificial lake and started to train in swimming and rowing. The youth of Minsk, the capital of Byelorussia, did the same thing this summer. The sportsmen of Lvov repaired their own stadium, athletic fields and aquatic station. The local Spartak sports society opened a swimming pool which was the scene of the U.S.S.R. swimming championship this summer.

More attention is being paid nowadays to the manufacture of athletic equipment. In Kuibyshev, local factories are making ski fastenings, football boots, skates, rims for bicycles, cycling trunks and jerseys. Other cities are following the example set by Kuibyshev.

The mass nature of the physical culture movement in the U.S.S.R. ensures a constant rise of new talent. People who display ability in any field of sport are given proper attention. Trainers help them to become skilled athletes.

It is worthy of mention that organized masters of sport, champions, do not break with their old contacts but continue to be members of the same sports societies.

All-Union Physical Culture Day was instituted in 1939 by Government decision. Even in wartime the day was celebrated in many towns and villages by mass athletic events.

Nearly 25,000 young men and women filed across Moscow's Red Square in August, 1945, to mark All-Union Physical Culture Day. Represented in this annual pageant, now resumed after an interval of five years, were numerous sports societies and athletic delegations from each of the sixteen republics of the Soviet Union.

The first sports parade on Red Square was held in 1919. It was reviewed by Lenin. The next two were in 1924 and 1927. They became an annual feature beginning with the 1931 parade.

The beauty of the sports parade on Red Square excels anything hitherto known to the sports world. All the sixteen republics combine in their performances ethnographical characteristics with high-class athletic performance.

Each national delegation winds up its performance with some national dance, giving the spectators an opportunity to admire in turn the fiery Georgian Lekuri or Knife dance, the slow and charming Moldavanesque (dance of the Moldavian steppe peoples), the epic quality of the Karelian Sapo dance, the poetic Lyavonikha, danced amid Byelorussian birches, and the rollicking Ukrainian Hopak.

Another stirring display is presented by the children. In 1945 they turned Red Square into a Young Pioneer Camp. The bugle sounded the reveille and gymnastic exercises and games began. In another instant the square was turned into a huge Victory garden. Wielding miniature rakes, scythes and hoes in rhythm to gay music, the children gave a display of haying, harvesting and

weeding. This was interrupted by the bugle calling the children to their traditional campfire, the effect of which was skilfully produced by red and pink ribbons. There was some dancing and games around the fire until suddenly it went out and all of the 1,500 youthful performers raced to the Lenin Mausoleum behind a golden chariot bearing a Russian queen personifying the beauty and poetry of Russia. According to old Russian custom, she bowed low to the guests. Then three of the tiniest tots climbed on to the tribune and handed Stalin a huge bouquet of flowers as a storm of applause thundered over the square.

The sports procession in the Red Square turns into a sunny festival of the unity of the most diverse national cultures.

On that day Moscow becomes a gigantic stadium. On that day masters of tennis, champions of the running track and the swimming pool, the great boxers, jumpers and javelin throwers, football players, discus throwers, parachute jumpers demonstrate their achievements, demonstrate their preparedness for labour and defence.

The exultant young folk march past in song, saluting Joseph Stalin, the leaders of the Soviet Government, Red Army generals, outstanding scientists, writers and artists, and leading workers from Moscow factories. They are living proof of Stalin's own words who said that a new generation of workers is rising in the U.S.S.R., healthy, buoyant in spirit, able to make our Soviet country a tower of strength.

THE TRAINING OF SPORTS COACHES

The scope and development of sport in the Soviet Union makes the problem of training sports instructors and coaches an urgent one. There are seven special institutes

and 27 other schools in different parts of the U.S.S.R. to train these instructors.

The Institutes of Physical Culture admit only those with high school education, following an eliminating contest which includes an examination in physical fitness. Preference is given to candidates who have won the G.T.O. (Prepared for Labour and Defence) Badge, since the number of applicants is always two or three times greater than the number of vacancies.

The courses at these institutes extend over a period of four years and include the study of biology, anatomy and physiology, history of world and Soviet sport, methods of teaching physical exercises and coaching in sports technique. It is not surprising, therefore, to find the many students of these institutes participating in various sports events.

Before the war these Institutes passed out between 3,000 to 4,000 students, and these were assigned to the most responsible positions for teaching sport.

Then there are special schools of physical culture whose curriculum is more simplified and extends over a period of three years. People with secondary school education are admitted here. Upon graduation they are given appointments as sports instructors in secondary and technical schools as well as in city and rural sports societies. As many as 6,000 students graduated each year from these schools. The question is now under consideration of opening up such a school in every regional centre of the Soviet Union.

In addition to the institutes and special schools, there are five schools in the Russian S.F.S.R. which train sports instructors for the public schools. Last summer the number of new coaches was far from sufficient to meet the requirements of all schools. During the war, departments of physical training were instituted in all teachers' colleges. There are nearly 200 such colleges in the U.S.S.R. with an

enrolment of approximately 100,000 students. Thus, teachers of, say, mathematics or geography can also take physical culture in the public schools.

Coaches are trained in special courses, set up by the sports' societies, the plan of study being worked out by the Government Sports Committee. Those who finish the course become coaches or assistant coaches. The majority of them, however, do not make it their sole profession, but carry it out as a social duty on a voluntary basis. Before the war there were between 10,000 to 15,000 such coaches in the Soviet Union .

During the war most of the men studying in Institutes of Physical Culture and special schools enlisted in the army or joined guerrilla detachments, while girl students took an active part in training Red Army draftees and served as remedial gymnastic instructors in military hospitals.

Now that the war is over there has been an increased enrolment of young men and women in the Institutes and schools. This has been so great that the question of increasing the present number of Institutes of Physical Culture is now under consideration.

SPORT AND P.T. IN THE RED ARMY

In the Red Army physical training and sport is one of the most important factors in military training for all units. The achievement of physical fitness goes hand in hand with training in military technique, and the two together complete the soldier's education in the art of war. The Infantry Regulations of the Red Army state: "Battle is the supreme test of a soldier's moral and physical qualities. It is often necessary to attack after a long and tiring march, and continue the attack day and night for a considerable period. Consequently, in order to carry out orders, the soldier must be able to overcome difficulties and hardships, while at the same time retaining his boldness,

courage and decision, with an unswerving desire to meet the enemy and take him prisoner or destroy him."

The complete mastery of modern military technique and the ability to utilise it to the full is only possible to the man who possesses, in addition to the highest moral qualities, such physical attributes as stamina, ability to co-ordinate his movements, bear extremes of heat and cold, and other conditions where the body is subjected to long periods of strain. The main task of physical training and sport is to develop these qualities in every Red Army man. In this connection the following remarks taken from a letter from a former soldier, trained in the hard school of the Great War, Senior Guardsman Yashin, are of great interest:

"It was comparatively easy for me to stand the marching and fighting, even under the most severe conditions of snow and heavy rain, and the usual experiences of life in the trenches and dug-outs during the war. My sports training had developed my stamina and firmness of character, and had strengthened me against hardships and deprivations."

No man can stand the trials and difficulties of life at the front unless he has been hardened physically. Sleepiness and weariness not only lower a man's fighting ability, but also result in unnecessary losses. The man who hesitates or is slow to take his place pays the penalty by being the first to fall under the enemy's fire.

Physical training and sport became a reserve of power for the Red Army. The continuous attention of the Soviet government, the Party, and Stalin personally to the physical well-being and development of the workers resulted in the Soviet Union becoming one of the most sport-loving nations in the world, where every man and woman had the right and was furnished with means to engage in physical training and in sports of all kinds. Before the Soviets came into power the great majority of the people were only able

to satisfy their taste for sport in their traditional national games and competitions. Most forms of sport were the privilege of a narrow circle of bourgeois clubs and other groups. This was undoubtedly the main reason why Russian athletes showed a marked inferiority as compared with those of other countries.

Since the Soviet government came into existence there has been a remarkable development in all branches of physical education. Millions of athletes have adopted such forms of sport as gymnastics, light athletics, boxing, football, tennis, ski-ing, swimming, cycling, rowing, sailing, fencing, and so on.

In spite of the pitiful sporting legacy of Tsarist Russia, in a short space of time Soviet athletes began to make international sporting records. Many of our Soviet record-breakers are famous far beyond the borders of Russia: in weight-lifting, Georgi Popov, Grigori Novak, Yakov Kutsenko, Alexander Bozhko, Serge Ambartsumyan, Liapidevski, Khatimski; for swimming and diving, Semyon Boichenko, Leonid Meshkov, Ivan Dmitrieff, Sima Blokhina, Claudia Aleshina; in boxing, Nikolai Koroliev, Evgeny Oguriyev, Victor Mikhailov; in fencing, Klimov, Vishpolski, Bulochko, Andrievski, Tarasov, Tumanov. The parachutists Amintaev, Evdokimov, Babushkin, Yakovliev, and Malinovsk were the pattern and example for the brilliant group of parachute troops in the Red Army, who attacked the German marauders far behind the front line.

The whole world praised our record-breaking fliers, Chkalov, Gromov, Yumanshev, Lipkin, Kokkinaki, Stepanovski, and others. Soviet airmen earned the gratitude of the entire world for their victories over Fascist Germany, Pokrishkin, Talulikin, Pavlov, Prokhorov, and many other "Stalin's eagles."

An honoured place in the group of Soviet glider pilots is occupied by Kartashev, Savtsev, Kimmelman, Malinovski,

Romanov, Komitz, Sukhomalin, Ovsianikov, Lisitsin, and Klepikov, who between them up to January 1, 1941, established twelve international records, including the long-distance record for glider flight of 749.2 kilometres, the endurance record of 38 hrs. 40 mins., and the height record of 4,275 metres (13,000 ft). Equally well known are such exponents of light athletics as Znamenski, Golovkin, Kuznetsov, Kanaki, Vanin, Pugachevski, Ivankovitch, Stepanov, Vassiliev, Sechepov, and Kosariev. With other outstanding ski-runners such as Vassiliev, Bulochkin, Miakov, Karpov, Novikov, Orlov, Kulakov, Mojhaiski; and Volotova, Piniازهva established and trained a company of ski-runners which took part in the Great War under her direction and formed the nucleus of hundreds of ski-battalions and dozens of ski-brigades.

Many Soviet athletes have achieved fame in such sports as football, tennis, cycling and motor-cycling races, wrestling and ski-jumping. It is enough to mention only Phyodotov, Mazur, Solovov, Grigaut, Kharchenko, and Krilov.

Many Soviet athletes were heroes in the Great War, and many received the honour of being decorated as Heroes of the Soviet Union, and promotion as generals and colonels of the Red Army. Among these we may mention Colonel-General Zheltov, Major-generals Baklanov and Muratov, and Colonel Kopilov.

During the war the attention of the Soviet government, the commanders of the Red Army, and Stalin personally was directed even more intensely towards the development of sport and physical training. Millions of Soviet citizens completed courses of physical training and took part in mass competitions in unarmed combat, gymnastics, swimming, cross-country ski-running and so on. Sport was encouraged not only behind the lines and in training establishments, but also at the front itself. Summer and winter meetings, cross-country team races and ski competitions

were organised, not only in all theatres of war, but also at the front. During the blockade of Leningrad a mass competition was run for the soldiers occupied in the defence of the city.

During the World War the Red Army adopted an entirely new scheme of sports activities, different in principle from anything which had preceded it. It consisted of a series of competitions and tests of a varied character, which had to be taken by all army and training establishment personnel. The programme of these tests included not only the elementary physical training (Swedish drill), but also many tests of a purely military type: cross-country running, 80-kilometre route marches with rifle and pack, obstacle races including swimming, gymnastics, ski-running with rifle over various obstacles, throwing hand-grenades, unarmed combat, and medley relay races.

In addition to these obligatory competitions various types of sport were catered for on a voluntary basis, including gymnastics, fencing, swimming, light athletics, ski-running and so on.

As a result of the adoption of this scheme of obligatory tests the interest in sporting activities increased enormously, and the standard of physical training improved. As far as the route marches with full pack were concerned, they soon surpassed not only the previous Army standards of achievement, but also many sporting records of the recent past. For example, many platoons participating in the competitions in Moscow area, after completing a route march with rifle and pack of 80 kilometres, went through a series of obstacles arranged along a course of 600 metres, and a water crossing about 60 metres broad, in times ranging from 4 hrs. 4 mins. to 4 hrs. 30 mins.

This liking for sport, and the realisation of its importance in the Red Army, was revealed in a most striking way as soon as the war ended. As soon as the guns ceased to

fire along the front, a stream of requests came from the men in the line for sporting literature, programmes, for sports' instructors and trainers. At the present moment sports' activities in all sections of the army still on active service are in full swing.

APPENDIX

METRIC DISTANCES AND BRITISH EQUIVALENTS

Metric Distances		British Equivalents			
Kms.	Metres	Mls.	Yds.	Ft.	Ins.
	100		100	1	1 $\frac{1}{4}$
	150		164	0	1 $\frac{3}{4}$
	200		218	2	2 $\frac{1}{4}$
	300		328	0	3 $\frac{1}{2}$
	400		437	1	4 $\frac{1}{2}$
	500		546	2	5 $\frac{1}{2}$
	800		874	2	0
1	1,000		1,093	2	0
1	500		1,640	1	6
2		1	427	1	0
3		1	1,521	0	0
5		3	188	1	0
10		6	376	1	0
15		9	564	2	0
20		12	752	2	0